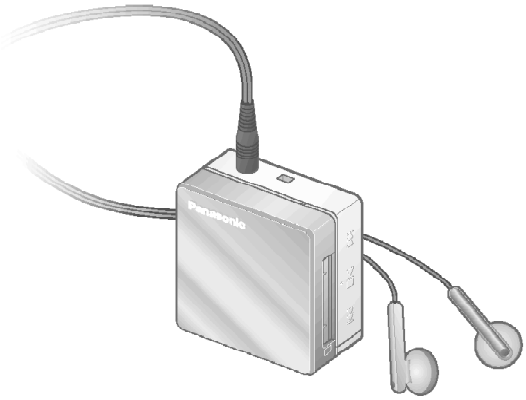
AD0503028CE
A1

SD Audio Player

SV-SD100VEB / SV-SD100VEG / SV-SD100VGC / SV-SD100VGK / SV-SD100VGN / SV-SD100VPP

Colour
(S)..... Silver Type

PDF created with pdfFactory Pro trial version www.pdffactory.com



SPECIFICATIONS

Specifications

Supported sampling frequency:	AUDIO:	32kHz, 44.1kHz, and 48kHz
	VOICE:	8kHz
Decoding/ Encoding:	AUDIO	AAC, WMA and MP3
	VOICE:	G.726
No. of channels:	Stereo, 2 channels (AUDIO, TUNER)	
	Mono, 1 channel (VOICE Rec/ Play, TUNER Rec/ Play)	
Frequency response:	20Hz to 20,000Hz (+0dB, -7dB) (AUDIO) / 20Hz to 3,000Hz (+0dB, -7dB) (VOICE)	
Mic:	Mono	
Radio Frequency range (FM):	EB,EG / GC,GK / GN areas:	87.50MHz to 108.00MHz (50kHz steps)
	PP area:	87.90MHz to 107.90MHz(200kHz steps) / 87.50MHz to 108.00MHz(50/100kHz steps)
Output level	3.3mW+ 3.3mW (16 Ω , M3 jack)	
Power supply:	DC1.2V (one rechargeable battery)	
Approximate play time *1:	SD audio continuous playback:	
		14hours 30minutes
	TUNER:	7hours 30minutes
	VOICE:	11hours
Approximate recording times*1:	TUNER REC:	4hours
	VOICE REC:	6hours
Maximum dimensions (WxHxD):	42.9x 43.2 x 17.5mm / (111/ 16”x111/ 16”x 11/ 16”)	
Cabinet dimensions (WxHxD):	42.0 x 42.0 x 17.5mm / (121/ 32”x121/ 32” x11/ 16”)	
Mass:	39.9g (1.407oz.) with battery / 27.4g (0.967oz.)without battery	
AC adaptor input:	AC110V - 240V 50Hz/60Hz	

PDF created with pdfFactory Pro trial version www.pdffactory.com

Recording Media: **SD Memory Card / (card capacities between 8MB and 1GB)**

-Specifications are subject to change without notice.
-The play times shown depend on operating conditions.
-Mass and dimensions are approximate.
-Useable capacity will be less.
-This unit is compatible with Windows Media Audio 9 (WMA9), though not with WMA9 Professional/Lossless/Voice and MBR*2.

***1When the supplied rechargeable battery is fully charged.**
***2Multiple Bit Rate: A file that contains the same content encoded at several different bit rates.**

© 2005 Matsushita Electric Industrial Co., Ltd. All rights reserved.
Unauthorized copying and distribution is a violation of law.

Panasonic

1. Accessories

- Stereo earphones..... 1pc.
(L0BAB0000192)
- Rechargeable battery with case..... 1pc.
(EB, EG, GC, GK, GN: RFKFHAZ10EM1) / (PP: RFKFHAZ10PM1)
- AC adaptor..... 1pc.
(EB, EG, GN: RFA2694) / (GC, GK: RFA2695) / (PP: RFA2693)
- AC mains lead.....1 pc.
(EB: RJA0053-3X) / (EG, GC: VJA0664) / (GK: K2CA2CA00020) / (GN: K2CJ2DA00008)
- CD-ROM (SD-Jukebox Ver.5.0LE).....1pc. / Supply of CD

PDF created with pdfFactory Pro trial version www.pdffactory.com

-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.
(EB, EG, GN, PP: VFF0268-S) / (GC, GK: VFF0269-S)

- USB Cable.....1pc. / (K1HA08CD0004)

- Neck lanyard.....1pc. (VFC4028)

2. Location of Controls

3. Power Supply Preparations

4. Caution for AC mains lead

PDF created with pdfFactory Pro trial version www.pdffactory.com

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

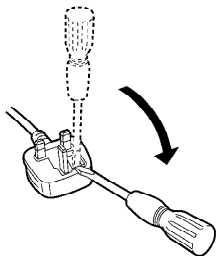
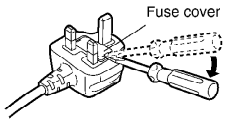


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

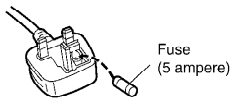
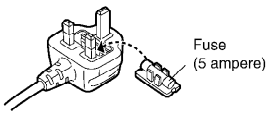


Figure B



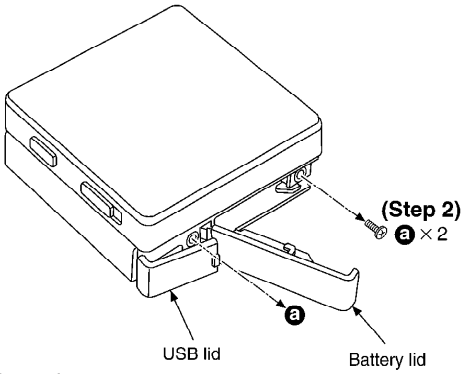
5. Disassembly Instructions

- This section describes procedures for replacing the main components.

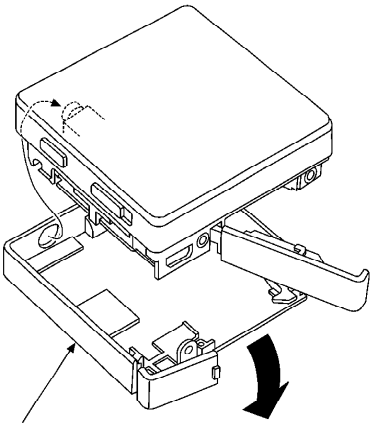
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Removal of the rear cabinet, front cabinet and middle cabinet

PDF created with pdfFactory Pro trial version www.pdffactory.com

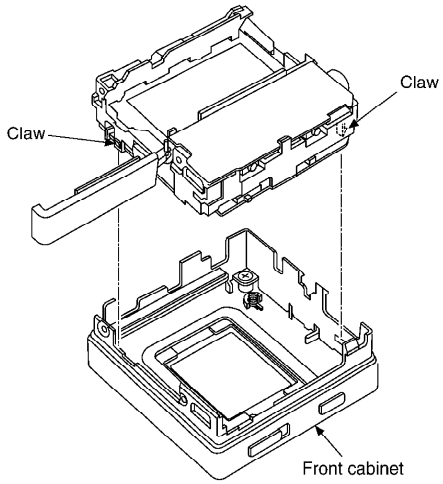


(Step 1)
Open the battery lid and USB lid.



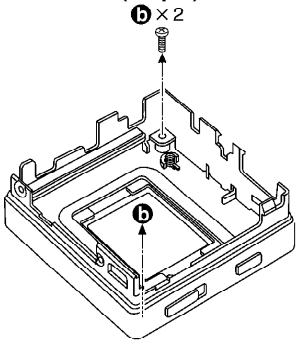
(Step 3)
Remove the rear cabinet.

(Step 4)
Release the 2 claws, and then remove the front cabinet.

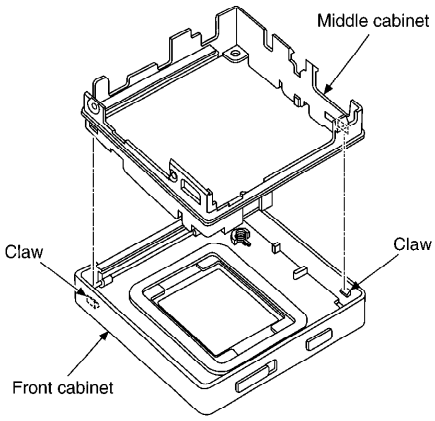


PDF created with pdfFactory Pro trial version www.pdffactory.com

(Step 5)
ⓑ × 2

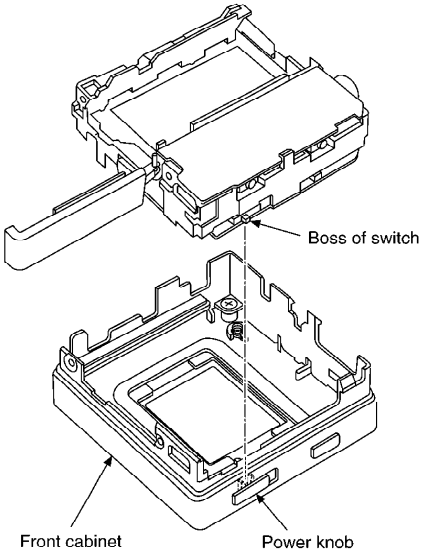


(Step 6)
Release the 2 claws, and then remove the middle cabinet.



Notice for installation of front cabinet

- Make sure the boss of switch is fit in the power knob.

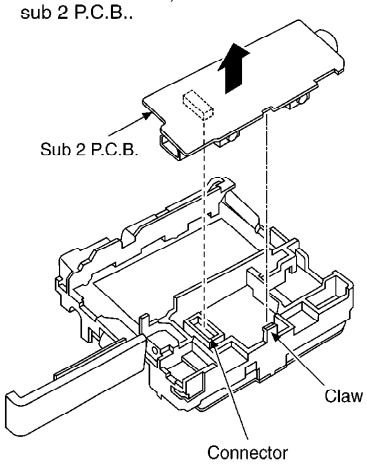


5.2. Removal of the Sub1 P.C.B., Sub2 P.C.B. and Main P.C.B.

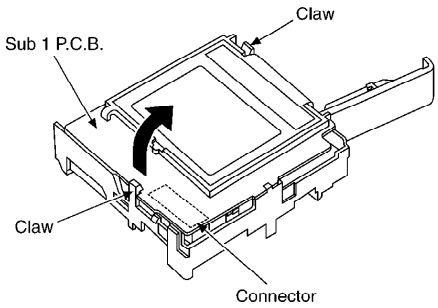
PDF created with pdfFactory Pro trial version www.pdffactory.com

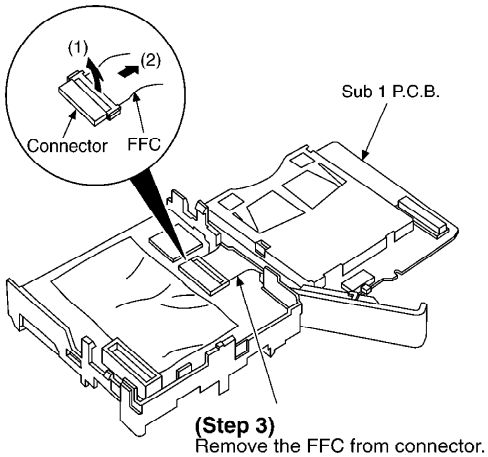
- Follow the (Step 1) - (Step 4) of item 5.1.

(Step 1)
Release the claw, and then remove the sub 2 P.C.B..



(Step 2)
Release the 2 claws, and then remove the sub 1 P.C.B. in the direction of arrow.

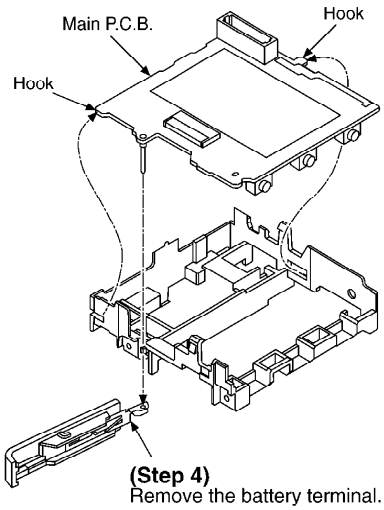




(Step 3)
Remove the FFC from connector.

PDF created with pdfFactory Pro trial version www.pdffactory.com

(Step 5)
Release the 2 hooks, and then remove the main P.C.B..

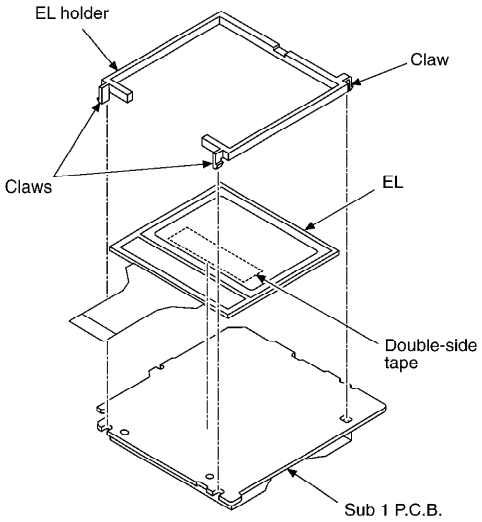


(Step 4)
Remove the battery terminal.

5.3. Removal of the EL

- Follow the (Step 1) - (Step 4) of item 5.1.
- Follow the (Step 2) - (Step 3) of item 5.2.

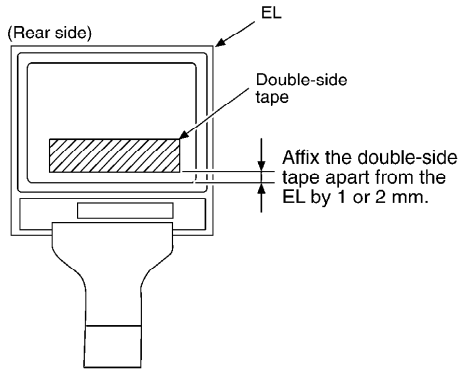
(Step 1)
Release the 3 claws, and then remove the EL holder.



(Step 2)
Remove the EL.
(As the EL is fixed with the doule-side tape, make sure to remove it carefully.)

PDF created with pdfFactory Pro trial version www.pdffactory.com

How to affix the double-side tape



6. SERVICE POSITION

This Service Position is used for checking and replacing parts. Use the following Extension cable and P.C.B. for servicing.

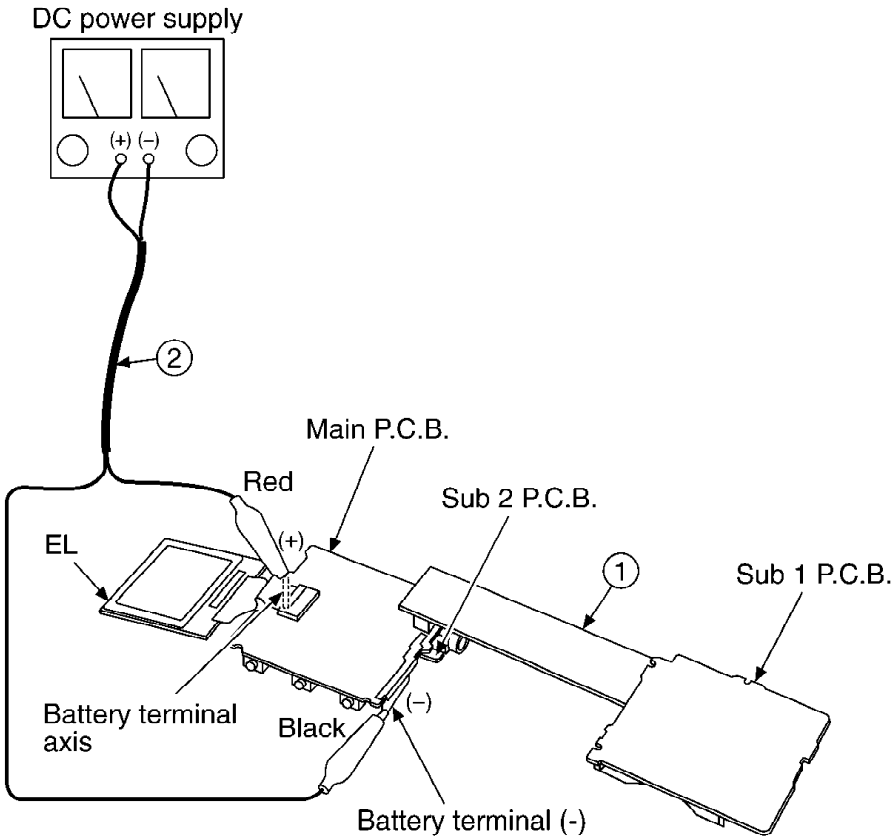
6.1. Extension cable and P.C.B.

No.	Parts No.	Connection	Form
1	RFZK0299	Main P.C.B. ~ Sub 1 P.C.B.	40 Pin Connector P.C.B.
2	VFK1576X0250	BATTERY TERMINAL (MAIN) - DC POWER SUPPLY	2PIN LEAD WITH CLIP

6.2. Service Position

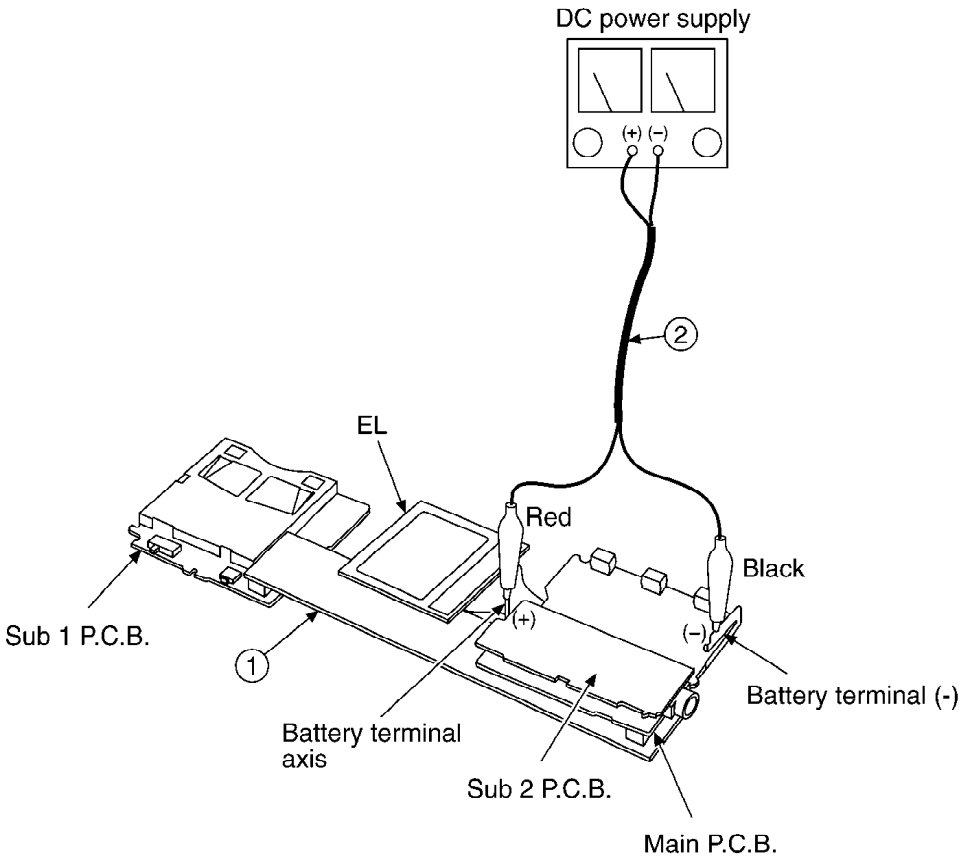
Checking for the main P.C.B.(A side) and Sub 1 P.C.B.(A side).

PDF created with pdfFactory Pro trial version www.pdffactory.com



Checking for the main P.C.B.(B side), Sub 1 P.C.B.(B side) and Sub 2 P.C.B.
Remove Sub 2 P.C.B. to check the main P.C.B.

PDF created with pdfFactory Pro trial version www.pdffactory.com



7. Precautions When Executing The Main PCB Replacement Service

The supplied device key loaded PCB (REP3902A-M) does not contain the regional default settings file. / That file must be written to the audio player by the procedure shown below.

1. Execute the "8.9. SERVICE 7: Default Settings Writing" procedure".

8. Service Mode

This mode is used to check unit operation and the condition of the PCB, and to verify that record /playback operations are occurring normally. / Always set the audio player to the service mode when replacing the PCB or IC. The service mode is also used for initializing and writing setting data.

8.1. Before Entering The Service Mode

Preparations

The following items are required in order to perform an operation check

- Rechargeable battery (accessory item) (must be fully charged)

- One SD card (service mode card)

PDF created with pdfFactory Pro trial version www.pdffactory.com

- One SD card with 8MB space available (for recording check)
- Accessory USB cable
- Personal computer with accessory SD-Jukebox Ver.5.0 installed

8.1.1. Preparing The Service Mode SD-Card

Preparation procedure for SD card

1. Connect the audio player to the personal computer where the accessory SD-Jukebox Ver.5.0 software is installed.
2. Insert the SD-card.
3. Use SD-Jukebox Ver.5.0 to write a music file to the SD-card.
4. End SD-Jukebox Ver.5.0 operation.
5. Download the necessary files (SD100TST.SDA and FLASH_WR.BIN) from TSN-WEB (Support Information From NWBG -PAVC).
6. Copy the files (SD100TST.SDA and FLASH_WR.BIN) into the SD-card's root directory.(The personal computer recognizes the audio player as a removable disk.)
7. Disconnect the audio player from the personal computer.
8. Perform a voice recording to the SD-card at the audio player.

Note:

If you may not be able to complete a downloding from the TSN-WEB page, Please order a jig SD card (RFKZ0294) or obtain the files (SD100TST.SDA and FLASH_WR.BIN) through your local Panasonic Service Organization.

Preparation procedure for jig SD card

1. Connect the audio player to the personal computer where the accessory SD-Jukebox Ver.5.0 software is installed.
2. Insert the jig SD-card (RFKZ0294).
3. Open the jig SD-card from the personal computer. (The personal computer recognizes the audio player as a removable disk.)

    - The SD-card's root directory contains the SD100TST.SDA

PDF created with pdfFactory Pro trial version www.pdffactory.com

service mode file, and FLASH_WR_XXXXXXXX.BIN* regional default settings file. / * "XXXXXXXX" denotes the region and model names.

4. Change the file name of the desired region's FLASH_WR_XXXXXXXX.BIN to "FLASH_WR.BIN".
5. Use SD-Jukebox Ver.5.0 to write a music file to the SD-card.
6. End SD-Jukebox Ver.5.0 operation.
7. Disconnect the audio player from the personal computer.
8. Perform a voice recording to the SD-card at the audio player.

*** Use the service mode's "audio playback check" and "voice playback check" functions for audio files and voice files. / Because the time required for this operation is determined by the length of the file, the file should be as short as possible.**

8.1.2. Preparing The Recording Check SD-Card

1. Connect the audio player to the personal computer where the accessory SD-Jukebox Ver.5.0 software is installed.
2. Format an 8MB SD-card at SD-Jukebox Ver.5.0.
3. Disconnect the audio player from the personal computer.

*** This card will be used for the "voice recording check" and "FM recording check" functions. The time required for this operation depends on the SD-card capacity. / When using an 8MB SD-card, one "SD-card formatting, full recording and playback" cycle takes approximately 1 hour.**

8.2. Entering The Service Mode

1. Place a fully charged battery in the audio player and turn the power ON.
2. Select the audio mode.
3. Insert the service mode SD-card in the audio player.

   - A playback operation begins.

4. Press the [STOP] button to stop the playback.
5. Press the [MODE] button one time to display the mode selection screen (Fig.S1).
6. Use the [FWD-Skip] and [REW-Skip] buttons to select the desired SERVICE item, then press the [PLAY/STOP] button to display the

PDF created with pdfFactory Pro trial version www.pdffactory.com

service mode menu (Fig.S2).

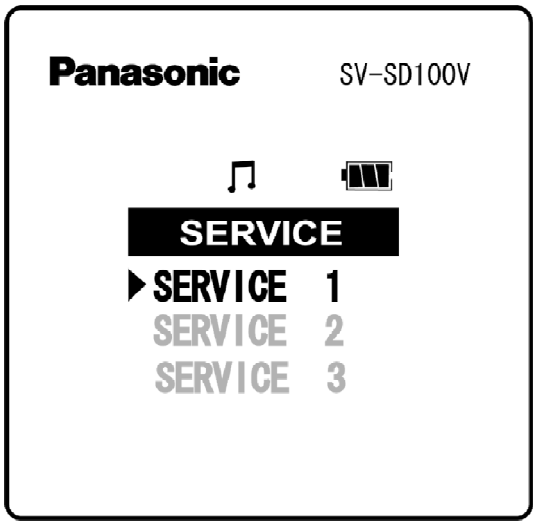
7. At the service mode menu, use the [FWD-Skip] and [REW-Skip] buttons to select the desired menu item, then press the [PLAY/ STOP] button to execute that menu.

Note:

Menus other than SERVICE 1 cannot be executed in a continuous manner.

Fig.S1

Fig.S2



8.2.1. Service Mode Function & Canceling The Service Mode

PDF created with pdfFactory Pro trial version www.pdffactory.com

Menu Item	Service Mode Description	Operation After Menu Selection	Buttons Used	Canceling The Service Mode	Service Mode Functi
SERVICE 1	Switches the EL display mode.	Returns to standard screen	[FWD-Skip], [REW-Skip], [PLAY/ STOP] / (menu operation only)	Turn power OFF, or switch back to EL display mode.	Because the display content checked during service mod execution, the EL display is ON at this menu.
SERVICE 2	Device key serial number display.	Service mode is executed.	None	Turn power OFF.	Verifies that the device key i without error to the main PC (Flash ROM).
SERVICE 3	Control button operation checks and remaining battery capacity display check	Service mode is executed.	[FWD-Skip], [REW-Skip], [MODE], [VOL+], [VOL-] (AD value measurement)	Turn power OFF.	Displays the rechargeable ba voltage, and the KEY IN volta conversion values (hexadeci the [FWD-Skip], [REW-Skip], [VOL+], [VOL-] key operation AD conversion value is used button operation checks and remaining battery capacity d
SERVICE 4	Model & region display	Service mode is executed.	None	Turn power OFF.	Displays the model and regi information. This content ca changed.
SERVICE 5	Initializes settings (all settings)	Service mode is executed.	[FWD-Skip], [REW-Skip], [PLAY/ STOP] / (menu operation only)	Turn power OFF (power is automatically turned OFF when processing ends).	Initializes model & region se and initializes resume inform the tuner's preset frequency. differs from the standard mo setting menu initialization in tuner's preset is also initializ
SERVICE 6	Reads out the settings information.	Service mode is executed.	None	Turn power OFF (power is automatically turned OFF when processing ends).	Verifies that the settings info is written to IC4 (Flash ROM) error.
SERVICE 7	Writes the default settings.	Service mode is executed.	None	Turn power OFF (power is automatically turned OFF when processing ends).	Writes the service mode SD- default setting file (FLASH_W content to IC4 (Flash ROM).T & region settings are written

PDF created with pdfFactory Pro trial version www.pdffactory.com

Menu Item	Service Mode Description	Operation After Menu Selection	Buttons Used	Canceling The Service Mode	Service Mode Functi
SERVICE 8	Card recognition check	Service mode is executed.	None	Open the battery cover.	Verifies that the SD-card (wh file is saved) can be recogni
SERVICE 9	Checks the audio playback operation.	Service mode is executed.	None	Open the battery cover.	Performs repeat playback an for audio playback errors.
SERVICE 10	Checks the voice playback operation.	Service mode is executed.	None	Open the battery cover.	Performs repeat playback an for voice playback errors.
SERVICE 11	Checks the voice recording operation.	Service mode is executed.	None	Open the battery cover.	Repeats the "SD-card format recording (recording until ca capacity is completely used) playback" procedure, and ch voice recording errors.
SERVICE 12	Checks the FM recording operation.	After tuner tuning, Service mode is executed.	[FWD-Skip], [REW-Skip], [PLAY/ STOP] / (during tuner tuning only)	Open the battery cover.	Performs "FM radio receptio the "SD-card formatting, full (recording until card's capac completely used), recording, playback" procedure, and ch FM recording errors.
SERVICE 13	Performs a device check.	Service mode is executed.	None	Open the battery cover.	Checks for malfunctions at t PCB's IC8 and IC4, and perip circuitry.

*** Auto power OFF in operation check modes**

Although the audio player is equipped with an auto power OFF function, this function is disabled when executing all operation check mode menu functions except SERVICE 1. / An automatic power OFF which is unrelated to the auto power OFF function occurs at the completion of SERVICE 5, 6, 7.

8.3. SERVICE 1: EL Display Mode Switching

Because the display content must be checked during service mode execution, the EL display is always ON at this menu.

1. **Execute the SERVICE 1 menu as described in section 8.2 (Entering The Service Mode), and display the EL display mode switching screen (Fig.S3).**
2. **Use the [FWD-Skip] and [REW-Skip] buttons to select "ON", and**

PDF created with pdfFactory Pro trial version www.pdffactory.com

then press the [PLAY/STOP] button to execute display mode switching.

Note:

Another SERVICE mode should be executed within 15 seconds after switching is performed. If the auto power OFF function is activated, the system returns to the "display ON/OFF control enabled" mode.

Fig.S3

8.4. SERVICE 2: Device Key Serial Number. Display

This display is used to verify that the device key is written to the main PCB's IC4 (Flash ROM) without error. / If the device key serial number fails to display, there is a problem with the IC4 (Flash ROM). As the IC4 (Flash ROM) cannot be replaced independently, replace the main PCB with a device key loaded PCB (REP3902A-M).

Note: Main PCB replacement should be performed with reference to section 7 (Precautions When Executing The Main PCB Replacement Service).

1. Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.
2. Execute the SERVICE 2 menu as described in section 8.2 (Entering The Service Mode), in order to display 5 bytes of the device key serial number. (Fig.S4).
3. Turn the power OFF to complete the procedure.

Fig.S4

PDF created with pdfFactory Pro trial version www.pdffactory.com

The displayed device key serial number varies.

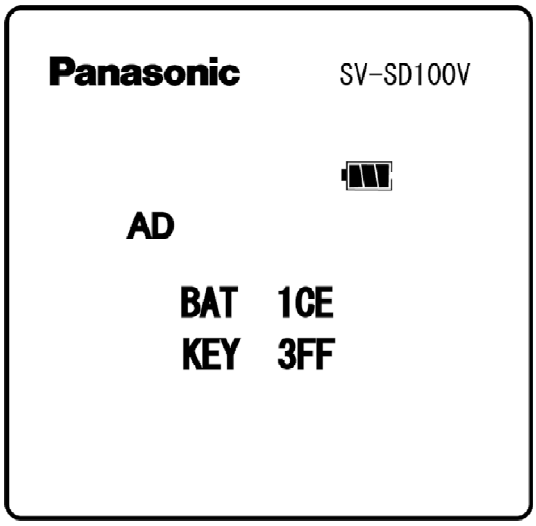
8.5. SERVICE 3: Control Button Operation Check & Remaining Battery Capacity Display Check

Displays the rechargeable battery voltage, and the KEY IN voltage AD conversion values (hexadecimal) at the [FWD-Skip], [REW-Skip], [MODE], [VOL+], [VOL-] key operations. / The AD conversion value is used for button operation checks and for the remaining battery capacity display.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute the SERVICE 3 menu as described in section 8.2 (Entering The Service Mode), in order to display the AD conversion values (hexadecimal) (Fig.S5).**
3. **Check the BAT's AD conversion value and the remaining battery capacity display.**
4. **Press each of the [FWD-Skip], [REW-Skip], [MODE], [VOL+], [VOL-] buttons and verify the changes in the KEY's AD conversion value.**
5. **Turn the power OFF to complete the procedure.**

Fig.S5

PDF created with pdfFactory Pro trial version www.pdffactory.com



8.5.1. AD Conversion Values

8.5.1.1. BAT (Remaining Battery Capacity AD Value)

The BAT display (hexadecimal) indicates the voltage of the internal rechargeable battery. / The internal rechargeable battery voltage = 2.9 (V) x [BAT display content] / 1024.
[Ex] When the BAT value is "1CC" ("460" as decimal value): / Internal rechargeable battery voltage = 2.9 x 460 / 1024 = 1.3027....= 1.303 (V)

Remaining Battery Voltage Display	AD Conversion Value
3 battery marks	1C3 < Batt
2 battery marks	1B3 < Batt < or = 1C3
1 battery mark	19B < Batt < or = 1B3
Blinking battery mark	161 < Batt < or = 19B
Low battery voltage	Batt < or = 161

8.5.1.2. KEY (Control Button's AD Value)

Displays the AD value judgment for the button operation.

Button Operation	AD Conversion Value
MODE	000 ~ 0CA
F-SKIP	151 ~ 1CE
R-SKIP	1CF ~ 259
Vol+	25A ~ 2CB
Vol-	2CC ~ 34E

If the AD conversion value displayed at the button operation is outside the range shown in the table, this may indicate a hardware malfunction.

8.6. SERVICE 4: Model & Region Display

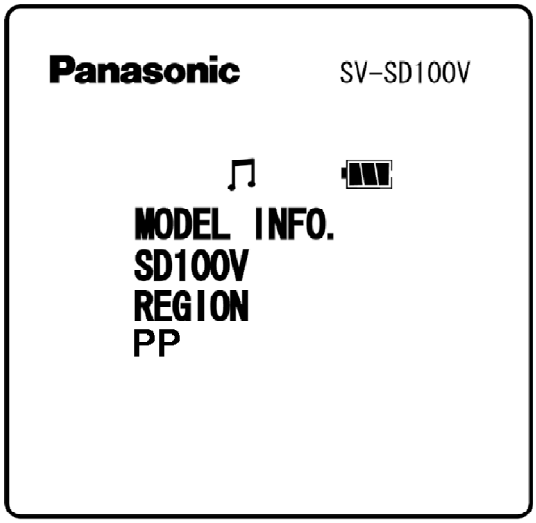
Displays the model and region information. This content cannot be changed.

1. Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.

PDF created with pdfFactory Pro trial version www.pdffactory.com

2. Execute the SERVICE 4 menu as described in section 8.2 (Entering The Service Mode), in order to display the model and region information (Fig.S6).
3. Turn the power OFF to complete the procedure.

Fig.S6



8.7. SERVICE 5: Settings Initialization (all settings)

Initializes the model & region settings, as well as resume information, and the tuner's preset frequency. / * Unlike the initialization item at the standard mode's setting menu, the tuner preset information is also initialized to the factory settings.

1. Execute the SERVICE 5 menu as described in section 8.2 (Entering The Service Mode).

   - After settings are initialized, the power is automatically turned OFF.

8.8. SERVICE 6: Settings Readout

Verifies that settings information has been written to the IC4 (Flash ROM) without error.

1. Execute the SERVICE 6 menu as described in section 8.2 (Entering The Service Mode).

   - Reads out the IC4 (Flash ROM) settings information, and writes it to the SD-card.
   - The power is then automatically turned OFF.
2. Use the accessory USB cable to connect the audio player to the personal computer.
3. From the personal computer, verify that the default settings file

PDF created with pdfFactory Pro trial version www.pdffactory.com

(FLASH_RD.BIN) has been written to the SD-card.

*** The presence of the FLASH_RD.BIN file on the SD-card indicates that the settings information has been written to the IC4 (Flash ROM) without error. / If the FLASH_RD.BIN file is not present on the SD-card, execute the "8.9. SERVICE 7: Default Settings Writing" procedure.**

8.9. SERVICE 7: Default Settings Writing

Writes the service mode SD-card's default settings file (FLASH_RD.BIN) to the IC4 (Flash ROM). / The model & region settings are written to the audio player by this procedure.

1. **Execute the SERVICE 7 menu as described in section 8.2 (Entering The Service Mode).**

   - Writes the default settings to the IC4 (Flash ROM), and the power is then automatically turned OFF.

2. **Execute the "SERVICE 6: Settings Readout" procedure to verify that the default settings have been written to the IC4 (Flash ROM).**

*** If the "SERVICE 6: Settings Readout" procedure reveals that the FLASH_RD.BIN file has not been written to the SD-card, this indicates a problem with the IC4 (Flash ROM). As the IC4 (Flash ROM) cannot be replaced independently, replace the main PCB with a device key loaded PCB (REP3902A-M).**

Note: Main PCB replacement should be performed with reference to section 7 (Precautions When Executing The Main PCB Replacement Service).

8.10. SERVICE 8: Card Recognition Operation Check

Verifies that the SD-card (where audio file is saved) can be recognized.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute the SERVICE 8 menu as described in section 8.2 (Entering The Service Mode), in order to display the card's detection count screen (Fig.S7).**
3. **Remove the service mode SD-card, then insert it again.**

   - The count value increases by 1 (1 card insertion) after the microcomputer reads the default data from the SD-card.

4. **Open the battery cover to complete the procedure.**

Fig.S7

PDF created with pdfFactory Pro trial version www.pdffactory.com

8.11. SERVICE 9: Audio Playback Check

Performs repeat playbacks, checking for audio playback errors.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute the SERVICE 9 menu as described in section 8.2 (Entering The Service Mode).**

   - The audio playback error check screen (Fig.S8) displays, and playback begins.
   - The repeat count (number of returns to first song) displays onscreen.

3. **Repeat playbacks continue until a playback error occurs. Therefore, if no error has occurred after approximately 10 playbacks, open the battery cover to end the procedure.**

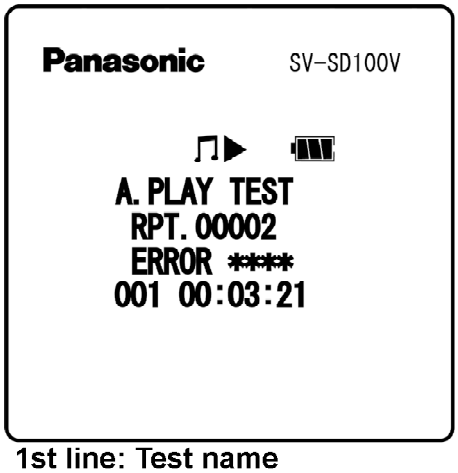
*** If a playback error occurs, playback is stopped, and an error code (Fig.S9) displays onscreen. / For error code details, refer to section 8.16 (Error Code Table).**

Fig.S8

PDF created with pdfFactory Pro trial version www.pdffactory.com

1st line: Test name
2nd line: Repeat count
4th line: Track number
and elapsed playback time

Fig.S9



1st line: Test name
2nd line: Repeat count
3rd line: Error code
See the Error Code Table
in section 8.16 for error code
(****) details.
4th line: Track number
and elapsed playback time

8.12. SERVICE 10: Voice Playback Check

Performs repeat playbacks, checking for voice playback errors.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute the SERVICE 10 menu as described in section 8.2 (Entering The Service Mode).**

   - The voice playback error check screen (Fig.S10) displays, and playback begins.
   - The repeat count (number of returns to first song) displays

PDF created with pdfFactory Pro trial version www.pdffactory.com

onscreen.

3. Repeat playbacks continue until a playback error occurs. Therefore, if no error has occurred after approximately 10 playbacks, open the battery cover to end the procedure.

*** If a playback error occurs, playback is stopped, and an error code (Fig.S11) displays onscreen. / For error code details, refer to section 8.16 (Error Code Table).**

Fig.S10

1st line: Test name
2nd line: Repeat count
4th line: Elapsed voice playback time

Fig.S11

1st line: Test name
2nd line: Repeat count
3rd line: Error code
See the Error Code Table in section 8.16 for error code (****) details.
4th line: Elapsed voice playback time

PDF created with pdfFactory Pro trial version www.pdffactory.com

8.13. SERVICE 11: Voice Recording Check

Repeats the "SD-card formatting, full recording (recording until card's capacity is completely used), and playbacks" procedure, and checks for voice recording errors.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute menus up to 6 as described in section 8.2 (Entering The Service Mode).**
3. **Remove the service mode SD-card from the audio player.**
   Note: The SD-card will be formatted at the SERVICE 11 menu. Therefore, be sure to remove the service mode SD-card from the audio player.
4. **Insert the recording check SD-card into the audio player.**
5. **Execute the SERVICE 11 menu as described in section 8.2 (Entering The Service Mode).**

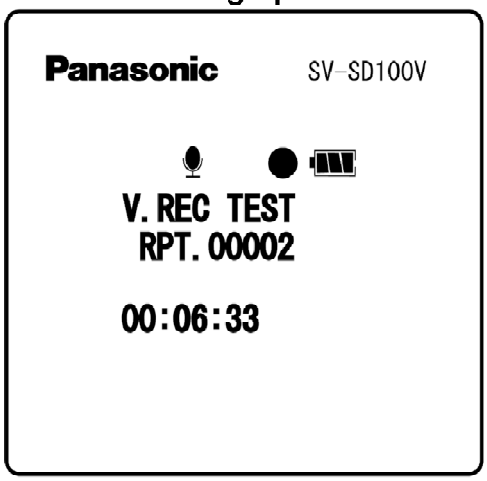
   - The voice recording error check screen (recording time: Fig.S12, playback time: Fig.S13) display, then the "repeated SD -card formatting, full recording (recording until card's capacity is completely used), and playback" procedure begins.
   - The repeat count displays onscreen.
6. **The above procedure is repeated until a recording error occurs. Therefore, if no recording error has occurred after approximately 2 repeats, open the battery cover to end the procedure.**

*** If a recording error occurs, recording is stopped, and an error code (recording time: Fig.S14, playback time: Fig.S15) displays onscreen. / For error code details, refer to section 8.16 (Error Code Table).**

Fig.S12

PDF created with pdfFactory Pro trial version www.pdffactory.com

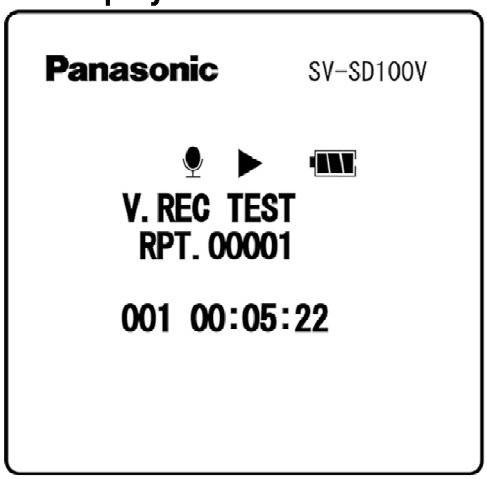
Voice recording operation



1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
4th line: Elapsed
voice recording time

Fig.S13

Voice playback time

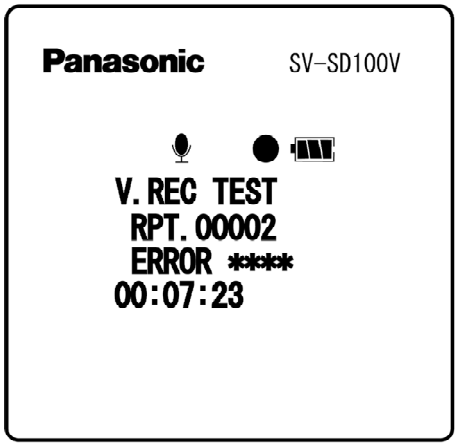


1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
4th line: Folder No.
& elapsed voice playback time

Fig.S14

PDF created with pdfFactory Pro trial version www.pdffactory.com

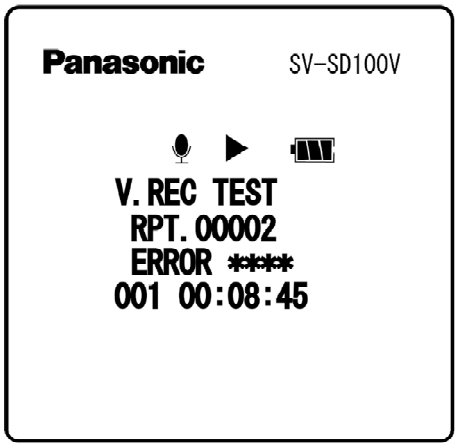
Voice recording operation



1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
3rd line: Error code
See the Error Code Table
in section 8.16 for error code
(****) details.
4th line: Elapsed
voice recording time

Fig.S15

Voice playback time



1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
3rd line: Error code
See the Error Code Table
in section 8.16 for error code
(****) details.
4th line: Folder No.
& elapsed voice playback time

8.14. SERVICE 12: FM Recording Check

Performs "FM radio reception, repeats the "SD-card formatting, full recording (recording until card's capacity is completely used), and playback" procedure, and checks for FM recording errors.

PDF created with pdfFactory Pro trial version www.pdffactory.com

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute menus up to 6 as described in section 8.2 (Entering The Service Mode).**
3. **Remove the service mode SD-card from the audio player.**
   Note: The SD-card will be formatted at the SERVICE 12 menu. Therefore, be sure to remove the service mode SD-card from the audio player.
4. **Insert the recording check SD-card into the audio player.**
5. **Execute the SERVICE 12 menu as described in section 1.2 (Entering The Service Mode).**

   - The reception frequency selection screen (Fig.S16) displays.

6. **Select the reception frequency.**

FWD-Skip
Tuning UP

REW-Skip
Tuning DOWN

7. **Press the [Play/Stop] button to begin FM recording.**

   - The FM recording error check screen (recording time: Fig.S17, playback time: Fig.S18) displays, then the "repeated SD-card formatting, full recording (recording until card's capacity is completely used), and playback" procedure begins.
   - The repeat count displays onscreen.

8. **The above procedure is repeated until a recording error occurs. Therefore, if no recording error has occurred after approximately 2 repeats, open the battery cover to end the procedure.**

*** If a recording error occurs, recording is stopped, and an error code (recording time: Fig.S19, playback time: Fig.S20) displays onscreen. / For error code details, refer to section 8.16 (Error Code Table).**

Fig.S16

PDF created with pdfFactory Pro trial version www.pdffactory.com

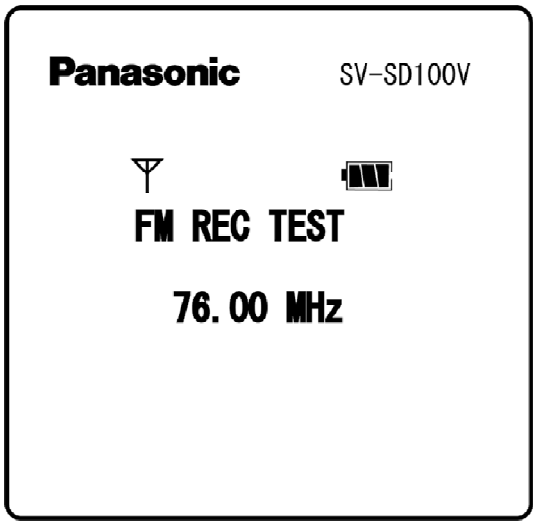
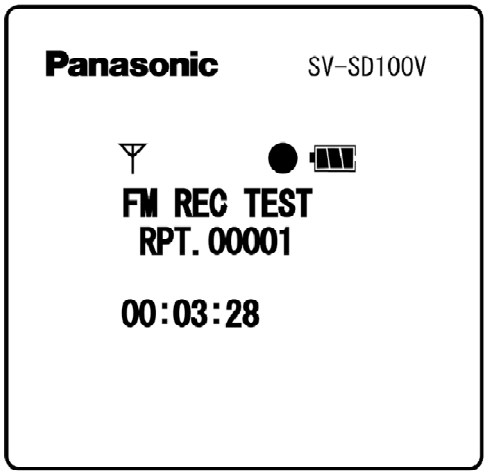


Fig.S17

FM recording time

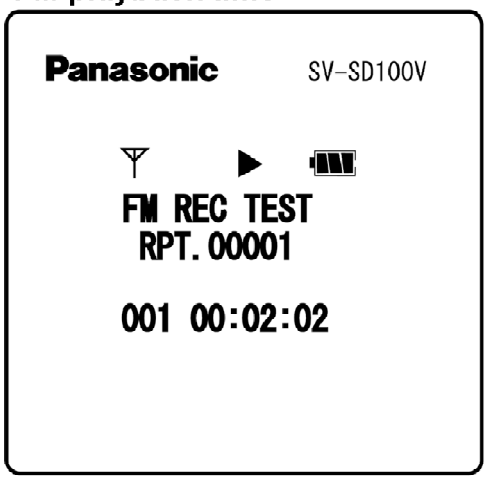


1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
4th line: Elapsed
FM recording time

Fig.S18

PDF created with pdfFactory Pro trial version www.pdffactory.com

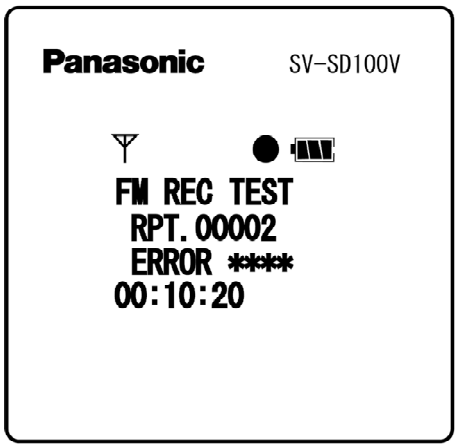
FM playback time



1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
4th line: Folder number
& elapsed FM playback time

Fig.S19

FM recording time

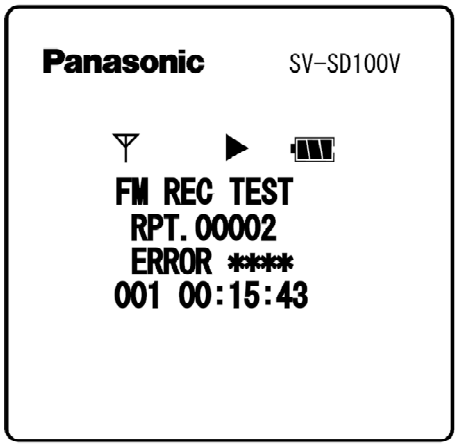


1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
3rd line: Error code
See the Error Code Table
in section 8.16 for error code
(****) details.
4th line: Elapsed
FM recording time

Fig.S20

PDF created with pdfFactory Pro trial version www.pdffactory.com

FM playback time



1st line: Test name
2nd line: Repeat count
(recording & playback 1-set count)
3rd line: Error code
See the Error Code Table
in section 8.16 for error code
(****) details.
4th line: Folder number
& elapsed FM playback time

8.15. SERVICE 13: Device Check

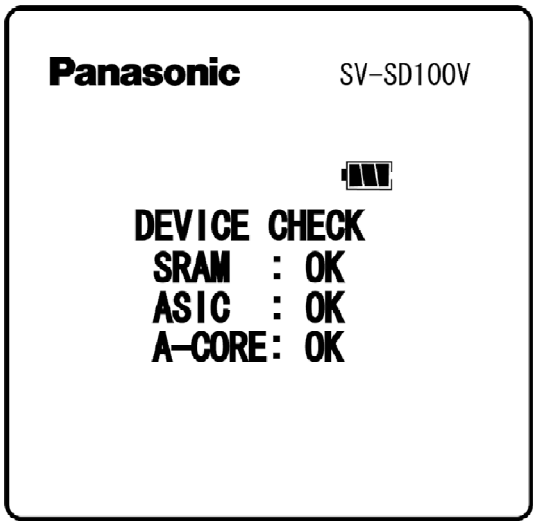
Checks for malfunctions at the main PCB's IC8 and IC4, and peripheral circuitry.

1. **Execute the "8.3 SERVICE 1: EL Display Mode Switching" procedure so that EL is always ON.**
2. **Execute the SERVICE 13 menu as described in section 8.2 (Entering The Service Mode).**

   - The device check screen displays.
   - The check results (Fig.S21) then display approximately 15 seconds later.
   *** Checks occur in the SRAM check, ASIC check, A-Core check order. If an error is found, the check operation stops at that point.**
3. **Open the battery cover to end the procedure.**

Fig.S21

PDF created with pdfFactory Pro trial version www.pdffactory.com



Display when all check results are OK

8.15.1. Explanation Of Device Check Results

Display Content	Symptom/Condition	Cause & Countermeasure
SRAM1 : NG	Possible cause: Main PCB IC4 malfunction.	Check the main PCB IC4 and peripheral circuitry.
SRAM2 : NG	Possible cause: Main PCB IC8 malfunction.	Check the main PCB IC8 and peripheral circuitry.
ASIC : NG	Possible cause: Main PCB IC8 malfunction.	Check the main PCB IC8 and peripheral circuitry.
A-CORE : NG	Possible cause: Main PCB IC8 malfunction.	Check the main PCB IC8 and peripheral circuitry.

As the IC4 (Flash ROM) cannot be replaced independently, replace the main PCB with a device key loaded PCB (REP3902A-M).

Note: Main PCB replacement should be performed with reference to section 7 (Precautions When Executing The Main PCB Replacement Service).

8.16. Error Code Table

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
1001	SD card initialization failure	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1002	MBR reading error (normal)	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1003	FAT reading error (normal)	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1004	DIR entry reading error (normal)	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1005	MBR logic error (normal)	Data	Format the SD-card at the a player.
1006	FAT logic error (normal)	Data	Format the SD-card at the a player.
1008	No SD AUDIO directory (normal)	Data	Replace with an SD-card th contains a recording
1009	MBR reading error (secure)	Hardware/ software	Replace the SD-card with a card. If the error persists, c main PCB's IC4 and periph circuitry.
100A	FAT reading error (secure)	Hardware/ software	Replace the SD-card with a card. If the error persists, c main PCB's IC4 and periph circuitry.
100B	DIR entry reading error (secure)	Hardware/ software	Replace the SD-card with a card. If the error persists, c main PCB's IC4 and periph circuitry.
100C	Authentication error	Data	Replace the SD-card with a card. If the error persists, c main PCB's IC4 and periph circuitry.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
100D	MBR logic error (secure)	Data	Replace with an SD-card th contains a recording.
100E	FAT logic error (secure)	Data	Replace with an SD-card th contains a recording.
1010	No SD AUDIO directory (secure)	Data	Replace with an SD-card th contains a recording.
1011	No KEY file	Data	Replace with an SD-card th contains a recording.
1012	No PLM file	Data	Replace with an SD-card th contains a recording.
1013	No TKM file	Data	Replace with an SD-card th contains a recording.
1015	NAVI level reading error	Hardware/ software	Either format the SD-card, it.
1016	PLM information acquisition failure (no information to acquire)	Data	Either format the SD-card, it.
1017	TKM information acquisition failure (no information to acquire)	Data	Either format the SD-card, it.
1018	PLM file size is 0	Data	Either format the SD-card, it.
1019	TKM file size is 0	Data	Either format the SD-card, it.
101A	AOB file size is 0	Data	Either format the SD-card, it.
101B	Stream transmission error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
101C	Stream transmission stop error	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
101D	Secure Read NG	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
101F	FSI internal error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1020	Message transmission failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1021	PL table creation failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1022	TKI table creation failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1023	AOB table creation failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1050	FDC reading error (Normal)	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
1051	FDC reading error (Secure)	Hardware/ software	Replace the SD-card with a card. If the error persists, c main PCB's IC4 and periph circuitry.
1053	Mount error (FSI_RW_FATAL)	Data	Format the SD-card at the a player.
1054	No Card (for Mount)	Data	Insert an SD-card.
1055	CARD LOCK status	Data	Release the SD-card lock
8003	Playback-disabled stream	Data	Either format the SD-card, it.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
8010	Dummy stream transmission failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8030	CODEC specifications violation	Data	Either format the SD-card, it.
8066	Request for other task failed	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8067	No vacancy in MSG processing queue	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8069	Sector information setting error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
806D	TKI table error	software	Either format the SD-card, it.
806E	Insufficient stream error	software	Either format the SD-card, it.
8080	Argument error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8089	ACORE not initialized	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
808A	No SMUTE CB wait	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
808C	BG Buffer Over	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8093	ACORE not initialized	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8095	BG Request Nothing	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
8098	code check error	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
809C	No READY interruption at BG processing	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
809D	No CHGACK interruption at BG processing	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
80A2	msg transmission buffer full	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
5002	Device key Acquisition failure	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
5003	Dummy mark failure	Data	Check the main PCB's IC4 peripheral circuitry.
F001	WARNING occurred at ACORE	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F002	ERROR occurred at ACORE	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F003	RVCI software error (debug)	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F004	CHG PARAM fails to change	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F005	No READY interruption	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
F006	No CHGACK interruption	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F007	ACORE driver BG processing queue overflow	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F008	ACORE error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F009	Card mount error	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F00A	Card format violation	Data	Format the SD-card at the a player.
F00B	Write-protect detection	Data	Release the SD-card lock
F00C	Card-full detection	Data	Format the SD-card at the a player.
F00D	TKIFULL detection in 1 folder	Data	Format the SD-card at the a player.
F00E	Folder-full detection	Data	Format the SD-card at the a player.
F011	File reading error	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F012	File writing error	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
F013	FS general error	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F014	Frame header for encode data not found	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
F015	Format error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
D001	Message not received	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E001	Message not received	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E002	No vacancy at MSG processing queue	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E003	Sector information setting error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
E004	Playback-disabled stream	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E005	CODEC specifications violation	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E006	Insufficient stream error	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E008	ERROR at ACORE	Hardware/ software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E009	No card	Hardware	Insert an SD-card.
E00A	No playback-enabled file	Data	Either perform a recording audio player, or replace the with a card that contains a
E00B	Inserted card is not an SD-card	Data	Format the SD-card at the a player.
E00C	Card format error	Hardware/ software	Format the SD-card at the a player.
E00D	LOCKED card error	Hardware/ software	Release the SD-card lock
E00E	TKM file check error	Data	Either format the SD-card, it.
E00F	MOB file check error	Data	Either format the SD-card, it.
E080	code check error	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
E081	No READY interruption at BG processing	Hardware	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E082	msg transmission buffer full	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E083	BG Buffer Over	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E084	BG Request Nothing	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E085	Argument error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E0A0	FS file error	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
E0A1	FS directory error	Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
E0A2	FS error	software	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B06B	Formatting ended in error (at formatting)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B070	File reading ended in error (at track protect/delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B071	File reading ended in error (at track protect/delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B072	File deletion ended in error (at track delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B073	File reading ended in error (at track protect/delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B075	Formatting ended in error (at formatting)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
B076	Authentication processing ended in error (all commands)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B077	Card driver ended in error (all commands)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B078	File deletion ended in error	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B07B	File deletion ended in error (at track delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B07C	File deletion ended in error (at track delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B081	Editing ended by unknown error	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.
B082	Track deletion disabled (Locked) (at track protect)	software	Release the SD-card lock
B083	SD_VCyyy directory deletion ended in error (at track delete)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

PDF created with pdfFactory Pro trial version www.pdffactory.com

Error Code	Error Description	Cause	Countermeasure
B084	SD_VCyyy directory reading ended in error (all commands)	software/Data	Try changing the SD-card, turning the power OFF and error persists, try removing battery and installing it aga error still persists, perform check.

9. Type Illustration of ICs, Transistors and Diodes

10. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S1:

Play/ Stop switch(**)**

S2:

Skip / Search / forward / Select switch (**)**

S4:

Skip / Search / backward / Select switch (**)**

S301:

Volume up switch (VOL +)

S302:

Volume down switch (VOL -)

S502:

MODE/HOLD switch (MODE/HOLD)

S503:

OPR switch (OPR)

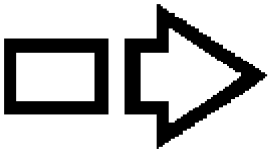
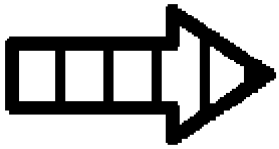
- Components identified by ⚠ ; mark have special characteristics important for safety.

- When replacing any of components, be sure to use only

PDF created with pdfFactory Pro trial version www.pdffactory.com

manufacture's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts.

- Voltage and signal line / : Positive voltage line / : Audio (digital) signal line / : Audio (analog) signal line /  : FM signal line /  : MIC signal line

- The voltage value and waveforms are the reference voltage of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN Jack). Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

Caution!!

- IC and LSI are sensitive to static electricity.
- Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.

11. Schematic Diagram

12. Printed Circuit Board Diagram

13. Block Diagram

PDF created with pdfFactory Pro trial version www.pdffactory.com

14. Terminal Function of ICs

14.1. IC3 (MNPH930FLDR): / Microcomputer

Pin No.	Terminal Name	I/O	Function
1	HOLD SW	-	Not used, open
2	POWER OFF REQ	O	Power supply Off control signal
3	NHDK	I/O	Bus cycle wait signal
4	NHRE	O	Read enable signal output
5	NHWEL	I/O	Low position Byte write enable signal
6	NHWEH	I/O	High position Byte write enable signal
7	VDD	-	Power supply
8	3.3VDET	I	External battery detection terminal
9	PLAY KEY IN	I	PLAY key signal input
10	ADC CCLK	O	ADC Clock
11	HP MUTE	O	Mute control signal / L:Mute ON / H:Mute OFF
12	ADC CDTI	O	ADC data output
13	ADC PDN	O	ADC Reset, power down
14	TEST OK	-	Not used, open
15	BP2	-	Not used, open
16	AVDD	-	Analog power supply
17	PDN	O	HP amplifier power down mode selection (Power down “L”)
18	MUTEEN	O	HP amplifier mute / (Mute ON “L”)
19	MLEN	O	HP amplifier latch enable signal
20	SYSCKNRST	O	External PULL_UP / Microcomputer clock supply(supply "H")
21	TEST	I/O	Test
22	EL CONT	O	EL power supply control / H: EL power ON
23	LCD RES	O	EL reset / H: EL reset release
24	ADC CS	O	ADC Chip selection

PDF created with pdfFactory Pro trial version www.pdffactory.com

Pin No.	Terminal Name	I/O	Function
25	AVSS	-	Analog power-supply voltage (GND)
26	EE P SK	O	Battery detection control
27	EE P DATAI	I	Not used
28	EE P DATAO	-	Not used, open
29	CL	O	Tuner Module/ HP_AMP clock signal
30	BUEN	O	Tuner Module/ HP_AMP enable signal
31	DA	O	Tuner Module data signal
32	EE P CS	-	Not used, open
33	CHARGEN	O	Charge control
34	NTINT0	I/O	Interruption terminal for Forwarding REQ & Cue/ Rev
35	USB DET	I	USB detection
36	NC	-	Not used, open
37	HPCNTL	I/O	MN677381 Headphone output control
38	HPCNTZ	I/O	MN677381 Headphone output control
39	POWER KEY IN	I	Power key
40	NC	-	Not used, open
41	SYSRST	I	Reset input
42	VDD	-	Power supply
43	NMI	-	VDD Connection
44	VSS	-	Power supply (GND)
45	XI	I	Low speed Oscillation input
46	XO	O	Low speed Oscillation output
47	VDD	-	Power supply
48	SYSCLK	I	System clock input
49	OSCO	-	Not used, open
50	MODE[H]	I	Mode setting input terminal / Processor mode 2 = “H”
51	MND0	I/O	Data I/O terminal
52	MND1	I/O	Data I/O terminal
53	MND2	I/O	Data I/O terminal
54	MND3	I/O	Data I/O terminal
55	MND4	I/O	Data I/O terminal
56	MND5	I/O	Data I/O terminal

PDF created with pdfFactory Pro trial version www.pdffactory.com

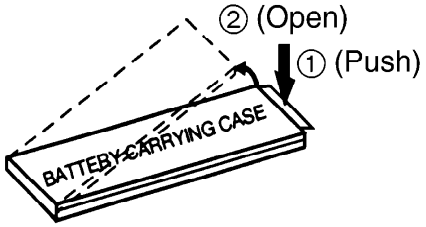
Pin No.	Terminal Name	I/O	Function
57	MND6	I/O	Data I/O terminal
58	MND7	I/O	Data I/O terminal
59	VSS	-	Power supply (GND)
60	MND8	I/O	Data I/O terminal
61	MND9	I/O	Data I/O terminal
62	MND10	I/O	Data I/O terminal
63	MND11	I/O	Data I/O terminal
64	MND12	I/O	Data I/O terminal
65	MND13	I/O	Data I/O terminal
66	MND14	I/O	Data I/O terminal
67	MND15	I/O	Data I/O terminal
68	VDD	-	Power supply
69	MNA0	O	Address output terminal
70	MNA1	O	Address output terminal
71	MNA2	O	Address output terminal
72	MNA3	O	Address output terminal
73	MNA4	O	Address output terminal
74	MNA5	O	Address output terminal
75	MNA6	O	Address output terminal
76	MNA7	O	Address output terminal
77	MNA8	O	Address output terminal
78	MNA9	O	Address output terminal
79	MNA10	O	Address output terminal
80	MNA11	O	Address output terminal
81	VSS	-	Power supply (GND)
82	MNA12	O	Address output terminal
83	MNA13	O	Address output terminal
84	MNA14	O	Address output terminal
85	MNA15	O	Address output terminal
86	MNA16	O	Address output terminal
87	MNA17	O	Address output terminal
88	MNA18	O	Address output terminal
89	MNA19	O	Address output terminal
90	VDD	-	Power supply
91	MNA20	O	Address output terminal
92	BATT	I	AD input terminal for voltage measurement
93	KEYIN	I	Key input
94	BP	O	FM beat proof control
95	MNCS0	O	External Flash chip select
96	MNCS1	O	SRAM chip select

PDF created with pdfFactory Pro trial version www.pdffactory.com

Pin No.	Terminal Name	I/O	Function
97	MNCS2	O	EL chip select
98	NHCS	O	MN677381 chip select
99	NHWR	O	External access direction output
100	USB CON	O	USB control terminal / L : D+ Pullup

15. Caution in use of Rechargeable Battery

- Take Rechargeable Battery out of Carrying Case and use it.
- Be sure to carry Rechargeable Battery in this Carrying Case. / If not, may either heat or ignite by shorting with a metal.



16. Caution for Rechargeable Battery

ENGLISH
A nickel metal hydride battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

FRANÇAIS
L'appareil que vous vous êtes procuré est alimenté par une pile au nickel-métal-hydrure (NiMH). Pour des renseignements sur le recyclage de la pile, veuillez composer le 1-800-8-BATTERY.

17. Replacement Parts List

Notes:

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the product. / (EBS): SV-SD100VEBS / (EGS): SV-SD100VEGS / (GCS):

PDF created with pdfFactory Pro trial version www.pdffactory.com

SV-SD100VGCS / (GKS): SV-SD100VGKS / (GNS): SV-SD100VGNS / (PPS): SV-SD100VPPS

- The marking [RTL] indicates that retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

- Supply of CD-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.

- All of other parts are supplied by SPC.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RJC99058	BATTERY TERMINAL(-)	1	
2	RMS0859	BATTERY TERMINAL AXIS	1	
3	RMZ0773	BATTERY INSULATION SHEET	1	
4	RMZ0774	P.C.B. INSULATION SHEET	1	
5	L5GAC2A00001	EL PANEL	1	
6	RMN0805	EL HOLDER	1	
7	RMZ0771	DOUBLE SIDE TAPE	1	
8	RJC99057	BATTERY TERMINAL(+)	1	
9	RMK0617	CHASSIS	1	
10	RGU2357-S	MODE BUTTON	1	
11	RGV0348-S	KNOB,POWER	1	
12	RKF0719-S	CARD LID	1	
13	RFKKVSD100V	FRONT CABINET	1	
14	RMB0812	GND SPRING	1	
15	RME0426	CARD LID SPRING	1	
16	RMS0858	CARD LID AXIS	1	
17	RKF0718-S	USB LID	1	
18	RKS0409-S	REAR CABINET	1	
19	RML0681	BATTERY LOCK LEVER	1	
20	RHD14130	SCREW	2	
21	RHD14131	SCREW	2	
22	RKK0184-S	BATTERY LID	1	
23	RKQ0271-W	MIDDLE CABINET	1	
24	RQLS0337	LABEL	1	(PPS) ⚠
24	RQLS0338	LABEL	1	(GCS)(EBS) / (EGS)(GNS) ⚠
24	RQLS0340	LABEL	1	(GKS) ⚠
A1	RFKFHAZ10PM1	RECHARGEABLE BATT. ASS'Y	1	(PPS)
A1-1	RFA0475-Q	BATTERY CARRYING CASE	1	(PPS)
A2	RFKFHAZ10EM1	RECHARGEABLE BATT. ASS'Y	1	(GCS)(EBS) / (EGS)(GKS) / (GNS)
A2-1	RFA0475-Q	BATTERY CARRYING CASE	1	(GCS)(EBS) / (EGS)(GKS) / (GNS)
A3	K1HA08CD0004	USB CABLE	1	
A4	RJA0053-3X	AC CORD	1	(EBS) ⚠
A4	VJA0664	AC CORD	1	K2CR2DA00004 / (GCS)(EGS) ⚠

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A4	K2CA2CA00020	AC CORD	1	(GKS) ⚠
A4	K2CJ2DA00008	AC CORD	1	(GNS) ⚠
A5	L0BAB0000192	STEREO EARPHONES	1	
A7	RFA2693	AC ADAPTOR	1	(PPS) ⚠
A8	RFA2694	AC ADAPTOR	1	(EBS)(EGS) / (GNS) ⚠
A8	RFA2695	AC ADAPTOR	1	(GCS)(GKS) ⚠
A9	RQCA1419	CAUTION SHEET	1	(PPS)(EBS) / (GNS)
A9	RQCA1389	CAUTION SHEET	1	(GCS)(EGS) / (GKS)
A10	RQT7847-P	O/I BOOK	1	(PPS) / English
A11	RQT7854-R	O/I BOOK	1	(GCS) / Russian / Ukrainian / [Simplified O/I book]
A12	RQT7848-C	O/I BOOK	1	(PPS) / Canadian French
A13	RQT7855-K	O/I BOOK	1	(GCS)(GKS) / Chinese
A14	RQT7849-D	O/I BOOK	1	(EGS) / German / Italian
A15	RQT7856-B	O/I BOOK	1	(GCS)(EBS) / (EGS)(GKS) / (GNS) / English
A16	RQT7850-E	O/I BOOK	1	(EGS) / Spanish / French
A17	RQT7851-H	O/I BOOK	1	(EGS) / Netherlands / Danish / Swedish / [Simplified O/I book]
A18	RQT7852-Z	O/I BOOK	1	(EGS) / Portuguese / Polish / Czeco / [Simplified O/I book]
A19	VFC4028	NECK LANYARD	1	
A20	VFF0268-S	CD-R	1	(PPS)(EBS) / (EGS)(GNS) / See "Notes"
A21	VFF0269-S	CD-R	1	(GCS)(GKS) / See "Notes"
C1	F1H0J4750003	6.3V 4.7U	1	
C2	F1K1C106A062	16V 10U	1	
C3	ECJ0EC1H220J	50V 22P	1	
C4	ECJ0EB1A104K	10V 0.1U	1	
C5	ECJ0EB1A104K	10V 0.1U	1	
C6	ECJ2FB0J106M	6.3V 10U	1	
C7	ECJ0EB1C103K	16V 0.01U	1	
C8	ECJ0EB1A104K	10V 0.1U	1	
C9	ECJ0EB1A104K	10V 0.1U	1	
C10	ECJ2FB0J106M	6.3V 10U	1	
C11	ECJ1VB0J105K	6.3V 1U	1	
C12	ECJ0EB1A104K	10V 0.1U	1	
C13	ECJ0EB1C103K	16V 0.01U	1	
C14	ECJ0EB1C103K	16V 0.01U	1	
C15	ECJ2FB0J106M	6.3V 10U	1	
C16	ECJ2FB0J106M	6.3V 10U	1	
C17	ECJ1VB0J105K	6.3V 1U	1	
C18	F1H0J4750003	6.3V 4.7U	1	
C19	ECJ0EB1A104K	10V 0.1U	1	
C20	ECUM1H080DCQ	50V 8P	1	
C21	ECUM1H080DCQ	50V 8P	1	
C22	ECJ0EB1A104K	10V 0.1U	1	
C23	ECJ0EC1H220J	50V 22P	1	
C24	ECJ1VB1C105K	16V 1U	1	
C25	ECJ2FB0J106M	6.3V 10U	1	
C26	ECJ0EB1A104K	10V 0.1U	1	
C27	F3F0G107A030	4V 100U	1	

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C28	F1H0J4750003	6.3V 4.7U	1	
C29	ECJ0EC1H180J	50V 18P	1	
C30	ECJ0EB1A104K	10V 0.1U	1	
C32	ECJ0EB1C103K	16V 0.01U	1	
C33	ECJ2FB0J106M	6.3V 10U	1	
C34	F1H0J2250003	6.3V 2.2U	1	
C36	ECJ2FB0J106M	6.3V 10U	1	
C38	ECJ0EB1A104K	10V 0.1U	1	
C39	ECJ0EC1H390J	50V 39P	1	
C40	ECJ0EB1A104K	10V 0.1U	1	
C41	ECJ2FB0J106M	6.3V 10U	1	
C42	ECJ0EB1A104K	10V 0.1U	1	
C43	ECJ0EB1A104K	10V 0.1U	1	
C44	ECJ0EB1A104K	10V 0.1U	1	
C45	F1H0J4750003	6.3V 4.7U	1	
C46	ECJ0EB1A104K	10V 0.1U	1	
C49	ECJ0EB1A104K	10V 0.1U	1	
C51	ECJ2FB0J106M	6.3V 10U	1	
C52	F1H0J2250003	6.3V 2.2U	1	
C53	F1H0J2250003	6.3V 2.2U	1	
C54	ECJ2FB0J106M	6.3V 10U	1	
C55	ECJ1VB0J105K	6.3V 1U	1	
C56	ECJ1VB0J105K	6.3V 1U	1	
C57	F1H0J2250003	6.3V 2.2U	1	
C59	ECJ2FB0J106M	6.3V 10U	1	
C60	ECJ0EB1A104K	10V 0.1U	1	
C61	ECJ0EB1A104K	10V 0.1U	1	
C62	ECJ0EB1A104K	10V 0.1U	1	
C63	ECJ1VB0J474K	6.3V 0.47U	1	
C64	ECJ1VB0J474K	6.3V 0.47U	1	
C101	ECJ1VB1C105K	16V 1U	1	
C102	ECJ1XB1C104K	16V 0.1U	1	
C103	ECJ1XB1C104K	16V 0.1U	1	
C104	ECJ1VB1C105K	16V 1U	1	
C105	ECJ1VB1C105K	16V 1U	1	
C301	ECJ0EB1E331K	25V 330P	1	
C302	ECJ0EC1H470J	50V 47P	1	
C303	ECJ0EC1H150J	50V 15P	1	
C304	ECJ0EB1H102K	50V 1000P	1	
C305	F1H0J2250003	6.3V 2.2U	1	
C306	ECJ0EB1E222K	25V 2200P	1	
C501	ECJ0EB1A104K	10V 0.1U	1	
C502	F3F0G107A030	4V 100U	1	
C503	ECJ0EB1C103K	16V 0.01U	1	
C513	F3G0G157A021	4V 150U	1	
C514	F3G0G157A021	4V 150U	1	
C515	ECJ1VB0J105K	6.3V 1U	1	
C516	F3F0G226A030	4V 22U	1	
C518	ECJ0EB1A104K	10V 0.1U	1	
C519	F3F0J226A062	6.3V 22U	1	
C520	ECJ0EB1A104K	10V 0.1U	1	
C521	F1H0J4750003	6.3V 4.7U	1	
C522	F3F0J226A032	6.3V 22U	1	
C523	ECJ0EB1A104K	10V 0.1U	1	

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C524	ECJ2FB0J106M	6.3V 10U	1	
C525	F1H0J4750003	6.3V 4.7U	1	
C528	ECJ2FB0J106M	6.3V 10U	1	
C529	ECJ1VB0J105K	6.3V 1U	1	
C530	ECJ1VB0J105K	6.3V 1U	1	
C531	ECJ1VB0J474K	6.3V 0.47U	1	
C532	ECJ1VB0J474K	6.3V 0.47U	1	
C533	ECJ0EB1C103K	16V 0.01U	1	
C534	F1H0J2250003	6.3V 2.2U	1	
C535	ECJ0EB1A104K	10V 0.1U	1	
C536	ECJ2FB0J106M	6.3V 10U	1	
C537	ECJ0EC1H050C	50V 5P	1	
C538	F1H0J2250003	6.3V 2.2U	1	
C539	ECJ2FB0J106M	6.3V 10U	1	
C540	F1H0J2250003	6.3V 2.2U	1	
C541	ECJ2FB0J106M	6.3V 10U	1	
CP1	K1KA40A00233	CONNECTOR(40P)	1	
CP2	K1KA20A00302	CONNECTOR(20P)	1	
CP100	K1MN25B00072	CONNECTOR(25P)	1	
CP301	K1KB20A00142	CONNECTOR(20P)	1	
CP501	K1KB40A00128	CONNECTOR(40P)	1	
D1	MA22D2800L	DIODE	1	
D2	MA2J72900L	DIODE	1	
D3	MA2J72900L	DIODE	1	
D4	B0JCJB000001	DIODE	1	
D5	MA22D2800L	DIODE	1	
D6	MA2S728	DIODE	1	
D7	MA2S728	DIODE	1	
D8	MA2J72900L	DIODE	1	
D501	MA2J72900L	DIODE	1	
HS501	K1NA09E00038	CONNECTOR(SD CARD)	1	
IC1	C0JBAF000529	IC	1	
IC2	C1ZBZ0002666	IC	1	
IC3	MNPH930FLDR	IC	1	
IC4	REP3902A-M	IC	1	
IC5	C1ZBZ0002665	IC	1	
IC6	C0JBAZ002327	IC	1	
IC7	C0EBD0000247	IC	1	
IC8	MN677381HAZR	IC	1	
IC9	C0EBD0000247	IC	1	
IC10	C1ZBZ0002666	IC	1	
IC12	C1ZBZ0002666	IC	1	
IC13	C1BB00000909	IC	1	
IC14	C0DBAGE00018	IC	1	
IC301	ENWA9301R	IC	1	
IC302	C0CBAAC00166	IC	1	
IC502	C0FBAJ000010	IC	1	
IC503	C0CBAAB00038	IC	1	
JK301	K1FB108E0008	JK,USB	1	

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
JK302	K2HC103E0028	JK,HEADPHONE	1	
L1	G1C100MA0085	COIL	1	
L2	G1C100MA0085	COIL	1	
L3	G1C100MA0085	COIL	1	
L4	J0JJC0000016	COIL	1	
L5	G1C4R7ZA0040	COIL	1	
L6	J0JBC0000015	COIL	1	
L301	RLQP68NMT2-Y	COIL	1	G1C68NM00003
L302	RLQPR22KT2-Y	COIL	1	G1CR22KA0009
L303	J0JBD0000045	COIL	1	
L304	J0JCC0000307	COIL	1	
L305	J0JCC0000307	COIL	1	
L306	J0JCC0000307	COIL	1	
L307	J0JCC0000307	COIL	1	
L308	J0JCC0000307	COIL	1	
L309	J0JCC0000307	COIL	1	
L310	J0JCC0000307	COIL	1	
L311	J0JCC0000307	COIL	1	
L501	G1C470KA0023	COIL	1	G1C470KA0022
L502	G1C470KA0023	COIL	1	G1C470KA0022
LB1	J0JCC0000307	COIL	1	
LB501	J0JCC0000307	COIL	1	
M501	L0CZAB000004	MICROPHONE	1	
P1	RPF0307-2	PROTECTION BAG	1	
P2	RPK2295	GIFT BOX	1	(PPS)
P3	RPK2275	GIFT BOX	1	(EBS)(EGS)
P3	RPK2276	GIFT BOX	1	(GCS)(GNS)
P3	RPK2277	GIFT BOX	1	(GKS)
P4	RPQ1916	PAD B	1	(PPS)
P5	RPQ1917	PAD C	1	(PPS)
P6	RPQ1915	PAD A	1	(GCS)(EBS) / (EGS)(GKS) / (GNS)
P7	RPQ1918	PAD D	1	(GCS)(EBS) / (EGS)(GKS) / (GNS)
PCB1	REP3902A-M	MAIN P.C.B. ASS'Y	1	[RTL]
PCB2	REP3903AA-S	SUB1 P.C.B. ASS'Y	1	[RTL]
PCB3	REP3903AB-S	SUB2 P.C.B. ASS'Y	1	[RTL]
Q1	B1CHMC000007	TRANSISTOR	1	
Q2	B1CHMC000007	TRANSISTOR	1	
Q3	B1CHMC000007	TRANSISTOR	1	
Q4	B1CHMC000007	TRANSISTOR	1	
Q8	B1CHMC000007	TRANSISTOR	1	
Q501	B1GFGCAA0001	TRANSISTOR	1	
QR1	DTA144EETL	TRANSISTOR	1	B1GDCFNN0001
QR2	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001
QR3	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001
QR4	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR5	B1GDCFLL0031	TRANSISTOR	1	
QR6	B1GBCFGA0001	TRANSISTOR	1	
QR7	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001
QR8	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001
QR501	UNR511400L	TRANSISTOR	1	
R1	ERJ2GEJ334	1/16W 330K	1	
R2	ERJ2GEJ100	1/16W 10	1	
R3	ERJ2GEJ104	1/16W 100K	1	
R4	ERJ2GEJ104	1/16W 100K	1	
R5	ERJ2GEJ334	1/16W 330K	1	
R6	ERJ3RBD162V	1/16W 1.6K	1	
R7	ERJ2GEJ104	1/16W 100K	1	
R8	ERJ2GEJ104	1/16W 100K	1	
R9	ERJ2GEJ104	1/16W 100K	1	
R10	ERJ2GEJ103	1/16W 10K	1	
R11	ERJ2GEJ334	1/16W 330K	1	
R12	ERJ2GEJ334	1/16W 330K	1	
R13	ERJ2GEJ221	1/16W 220	1	
R14	ERJ2GEJ124	1/16W 120K	1	
R15	ERJ2RKD334	1/16W 330K	1	
R16	ERJ2GE0R00X	1/16W 0	1	
R17	ERJ2RHD223	1/16W 22K	1	
R18	ERJ6RSJR10V	1/10W 0.1	1	
R19	ERJ2GEJ104	1/16W 100K	1	
R20	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R21	ERJ2GEJ104	1/16W 100K	1	
R22	ERJ2GEJ104	1/16W 100K	1	
R23	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R24	ERJ2GEJ332	1/16W 3.3K	1	
R25	ERJ2GEJ104	1/16W 100K	1	
R26	ERJ2GEJ104	1/16W 100K	1	
R27	ERJ2GEJ104	1/16W 100K	1	
R28	ERJ2GEJ334	1/16W 330K	1	
R29	ERJ2GEJ104	1/16W 100K	1	
R30	ERJ2GEJ220	1/16W 22	1	
R31	ERJ2GEJ105	1/16W 1M	1	
R32	ERJ2GEJ220	1/16W 22	1	
R33	ERJ2GEJ105	1/16W 1M	1	
R34	ERJ2GEJ220	1/16W 22	1	
R35	ERJ2GEJ104	1/16W 100K	1	
R36	ERJ2GEJ152	1/16W 1.5K	1	
R37	ERJ2GEJ334	1/16W 330K	1	
R38	ERJ2RHD272	1/16W 2.7K	1	
R39	ERJ2GEJ432X	1/16W 4.3K	1	
R40	ERJ2GEJ222	1/16W 2.2K	1	
R41	ERJ2GEJ104	1/16W 100K	1	
R42	ERJ2GEJ104	1/16W 100K	1	
R43	ERJ2RHD913	1/16W 91K	1	
R44	ERJ2RHD103	1/16W 10K	1	
R45	ERJ2GEJ152	1/16W 1.5K	1	
R46	ERJ8RQF2R2	2.2	1	
R47	ERJ2RHD103	1/16W 10K	1	
R48	ERJ2GEJ334	1/16W 330K	1	

PDF created with pdfFactory Pro trial version www.pdffactory.com

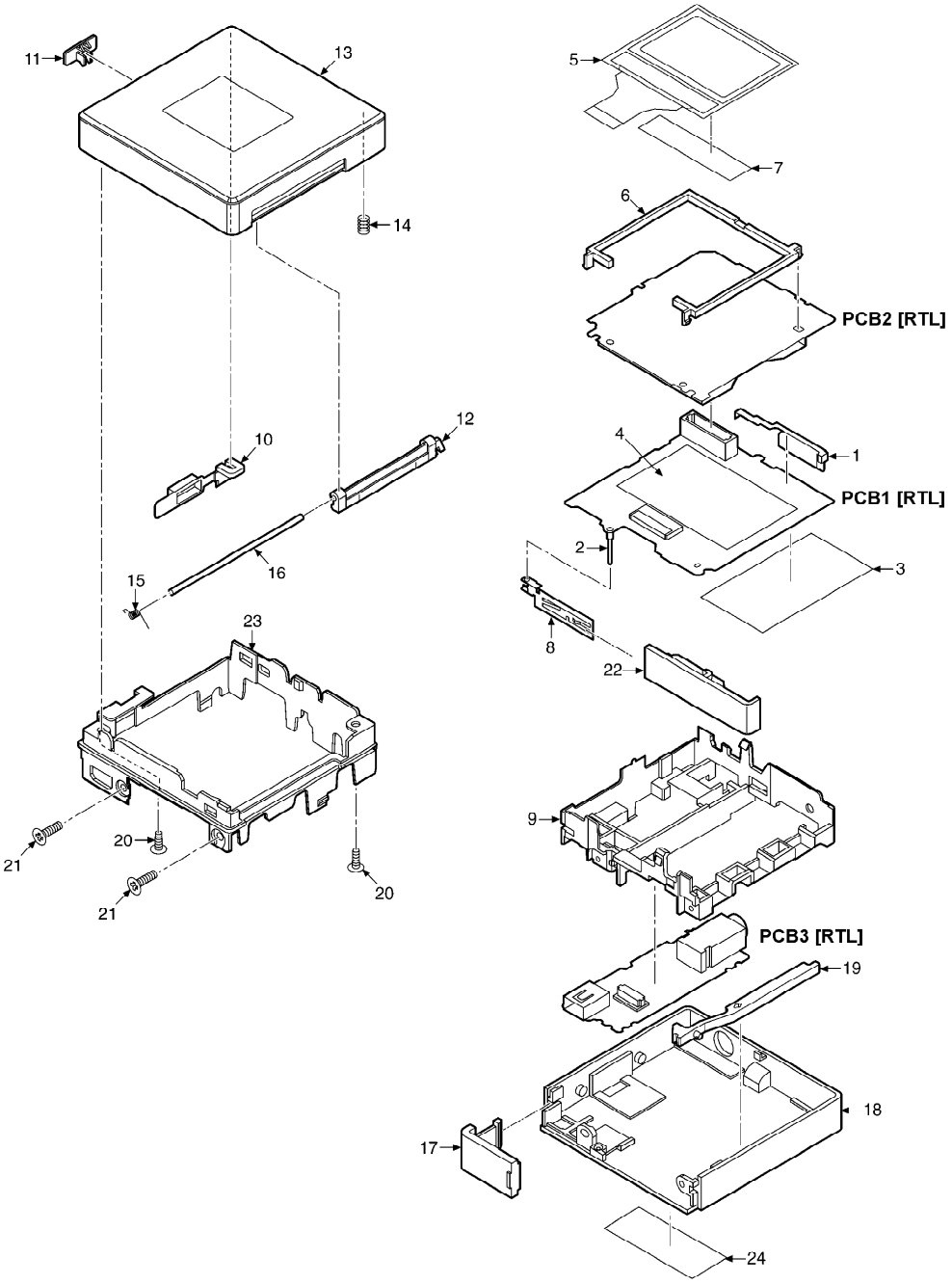
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R49	ERJ2GEJ104	1/16W 100K	1	
R50	ERJ2GEJ104	1/16W 100K	1	
R51	ERJ2GEJ104	1/16W 100K	1	
R52	ERJ2GEJ100	1/16W 10	1	
R53	ERJ2GEJ105	1/16W 1M	1	
R54	ERJ2GEJ473	1/16W 47K	1	
R55	ERJ2GEJ683	1/16W 68K	1	
R56	ERJ2GEJ334	1/16W 330K	1	
R57	ERJ2GEJ223	1/16W 22K	1	
R58	ERJ2RKD334	1/16W 330K	1	
R59	ERJ2RHD682X	1/16W 6.8K	1	
R60	ERJ2RKD154	1/16W 150K	1	
R61	ERJ6RSJR10V	1/10W 0.1	1	
R62	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R63	ERJ2GEJ223	1/16W 22K	1	
R65	ERJ2RKD224	1/16W 220K	1	
R66	ERJ2RKD334	1/16W 330K	1	
R67	ERJ6RSJR10V	1/10W 0.1	1	
R69	ERJ2GEJ393	1/16W 39K	1	
R70	ERJ2GEJ334	1/16W 330K	1	
R71	ERJ2GEJ334	1/16W 330K	1	
R72	ERJ2GEJ103	1/16W 10K	1	
R73	ERJ2GEJ103	1/16W 10K	1	
R74	ERJ2GEJ103	1/16W 10K	1	
R75	ERJ2GEJ224	1/16W 220K	1	
R76	ERJ2GEJ104	1/16W 100K	1	
R77	ERJ2GEJ104	1/16W 100K	1	
R78	ERJ2RKD330	1/16W 33	1	
R79	ERJ2RKD330	1/16W 33	1	
R80	ERJ2GEJ334	1/16W 330K	1	
R81	ERJ2GEJ334	1/16W 330K	1	
R82	ERJ2GEJ154	1/16W 150K	1	
R83	ERJ2GEJ334	1/16W 330K	1	
R84	ERJ2GEJ474	1/16W 470K	1	
R85	ERJ2GEJ100	1/16W 10	1	
R86	ERJ2GEJ474	1/16W 470K	1	
R88	ERJ2GEJ4R7X	1/16W 4.7	1	ERJ2RMJ4R7X
R89	ERJ2GEJ4R7X	1/16W 4.7	1	ERJ2RMJ4R7X
R90	ERJ2GEJ100	1/16W 10	1	
R91	ERJ2GEJ100	1/16W 10	1	
R92	ERJ2GEJ334	1/16W 330K	1	
R93	ERJ2GEJ334	1/16W 330K	1	
R94	ERJ2GEJ223	1/16W 22K	1	
R95	ERJ2GEJ103	1/16W 10K	1	
R96	ERJ2GEJ103	1/16W 10K	1	
R97	ERJ2GEJ334	1/16W 330K	1	
R98	ERJ2GEJ393	1/16W 39K	1	
R101	ERJ2RHD133	1/16W 13K	1	
R102	ERJ2GED683X	1/16W 68K	1	ERJ2RHD683X
R103	ERJ2GEJ104	1/16W 100K	1	
R105	ERJ2GEJ334	1/16W 330K	1	
R106	ERJ2GEJ334	1/16W 330K	1	
R107	ERJ2GEJ334	1/16W 330K	1	
R108	ERJ2GEJ334	1/16W 330K	1	

PDF created with pdfFactory Pro trial version www.pdffactory.com

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R109	ERJ2GEJ220	1/16W 22	1	
R110	ERJ2GEJ220	1/16W 22	1	
R111	ERJ2GEJ220	1/16W 22	1	
R112	ERJ2GEJ220	1/16W 22	1	
R113	ERJ2GEJ220	1/16W 22	1	
R301	ERJ2RHD682X	1/16W 6.8K	1	
R302	ERJ2GEJ153	1/16W 15K	1	
R303	ERJ2GE0R00X	1/16W 0	1	
R304	ERJ2GEJ472	1/16W 4.7K	1	
R305	ERJ2GEJ123	1/16W 12K	1	
R501	ERJ2GEJ222	1/16W 2.2K	1	
R502	ERJ2GEJ222	1/16W 2.2K	1	
R503	ERJ2GEJ391	1/16W 390	1	
R507	ERJ2GEJ100	1/16W 10	1	
R508	ERJ2GEJ100	1/16W 10	1	
R509	ERJ2GEJ2R2X	1/16W 2.2	1	ERJ2RMJ2R2X
R510	ERJ2GEJ2R2X	1/16W 2.2	1	ERJ2RMJ2R2X
R511	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R512	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R517	ERJ2GEJ4R7X	1/16W 4.7	1	ERJ2RMJ4R7X
R518	ERJ2GEJ100	1/16W 10	1	
R519	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R520	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R526	ERJ2GEJ473	1/16W 47K	1	
R527	ERJ2GEJ220	1/16W 22	1	
R530	ERJ2GEJ473	1/16W 47K	1	
R531	ERJ2GEJ473	1/16W 47K	1	
R532	ERJ2GEJ473	1/16W 47K	1	
R533	ERJ2GEJ473	1/16W 47K	1	
R534	ERJ2GEJ473	1/16W 47K	1	
R535	ERJ2GEJ473	1/16W 47K	1	
S1	K0H1BB000068	SW,PLAY/STOP	1	
S2	K0H1BB000068	SW,FWD-SKIP	1	
S4	K0H1BB000068	SW,REW-SKIP	1	
S301	K0H1BB000068	SW,VOL+	1	
S302	K0H1BB000068	SW,VOL-	1	
S502	EVQP7M01K	SW,MODE	1	
S503	RSS2A010-1A	SW,POWER	1	K0D112B00071
X1	H0J327200092	OSCILLATOR	1	
X2	H2D169500025	OSCILLATOR	1	
X3	H2D120500009	OSCILLATOR	1	

18. Cabinet Parts Location

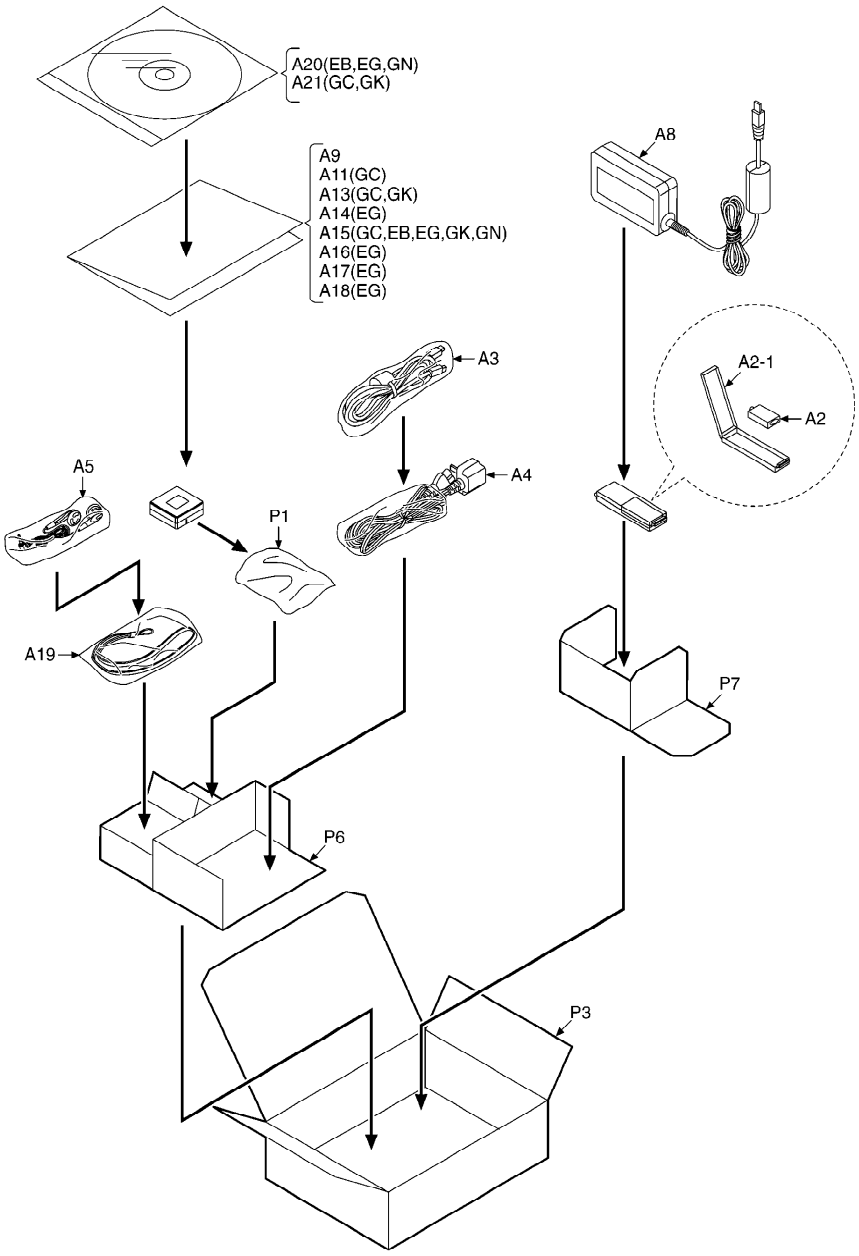
PDF created with pdfFactory Pro trial version www.pdffactory.com



19. Packaging

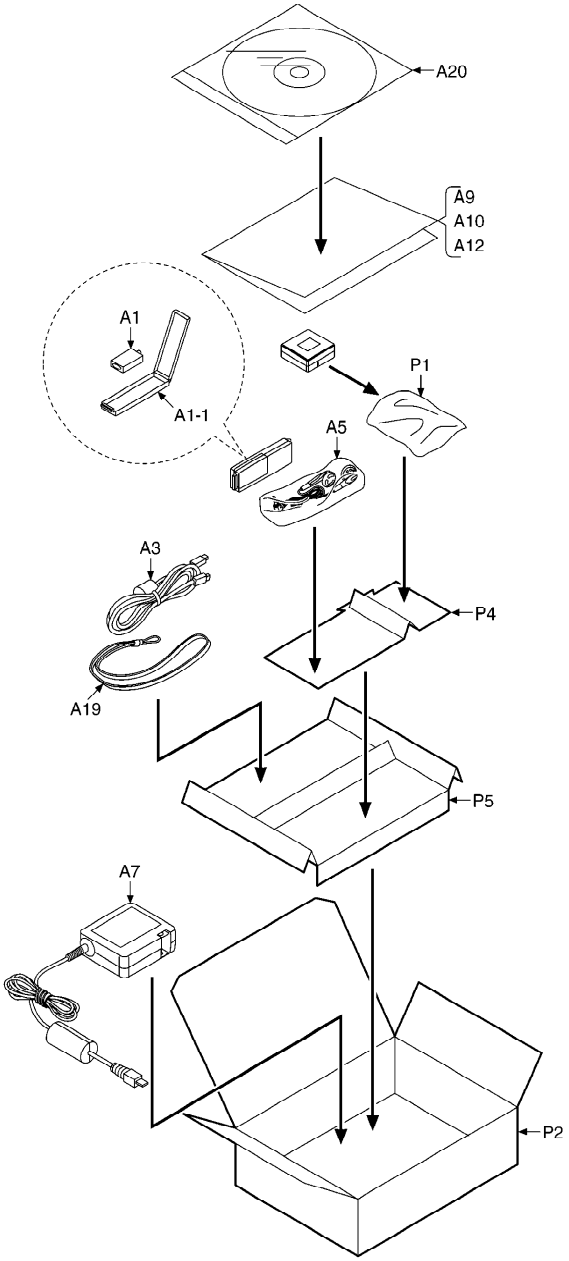
19.1. SV-SD100VEB/EG/GC/GK/GN

PDF created with pdfFactory Pro trial version www.pdffactory.com



19.2. SV-SD100VPP

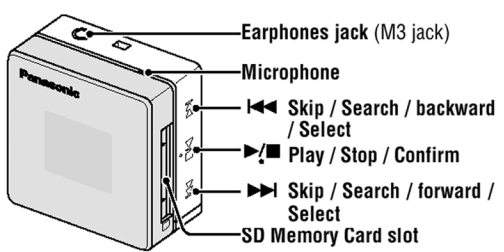
PDF created with pdfFactory Pro trial version www.pdffactory.com

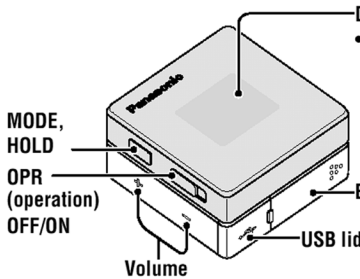


20. Schematic Diagram for printing with letter size

K0503YH/HM

PDF created with pdfFactory Pro trial version www.pdffactory.com


Earphones jack (M3 jack)
Microphone
Skip / Search / backward / Select
Play / Stop / Confirm
Skip / Search / forward / Select
SD Memory Card slot



① TUNER mode indicator
② VOICE mode indicator
③ AUDIO mode indicator
④ Play indicator
⑤ Recording indicator
⑥ Battery /charge indicator

■ Auto power-off function

In order to save power, the unit turns itself off if left unused for more than 10 seconds after being switched on. (AUDIO mode, VOICE PLAY mode)

Press ►/■ to turn the power on again. Play starts automatically.

■ Power save display

During play, the power save display appears if no operation is performed for more than 10 seconds.

Press the [MODE] to return to the previous screen.

■ Resume function

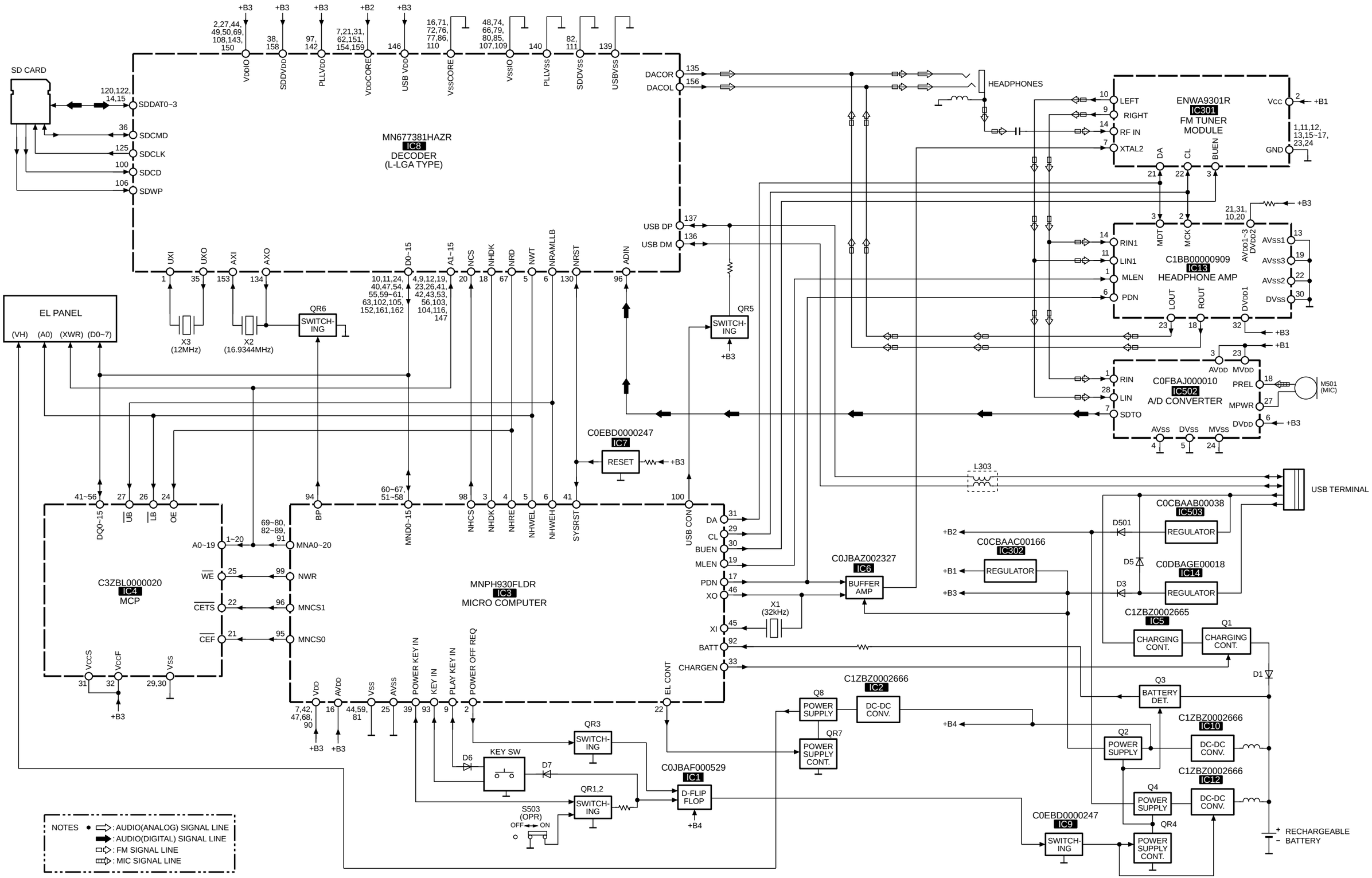
Play resumes from where last stopped.

This is cancelled if an SD Memory Card is changed or removed.

■ HOLD function

This function causes the unit to ignore button presses during play and so on, to prevent interrupting an operation.

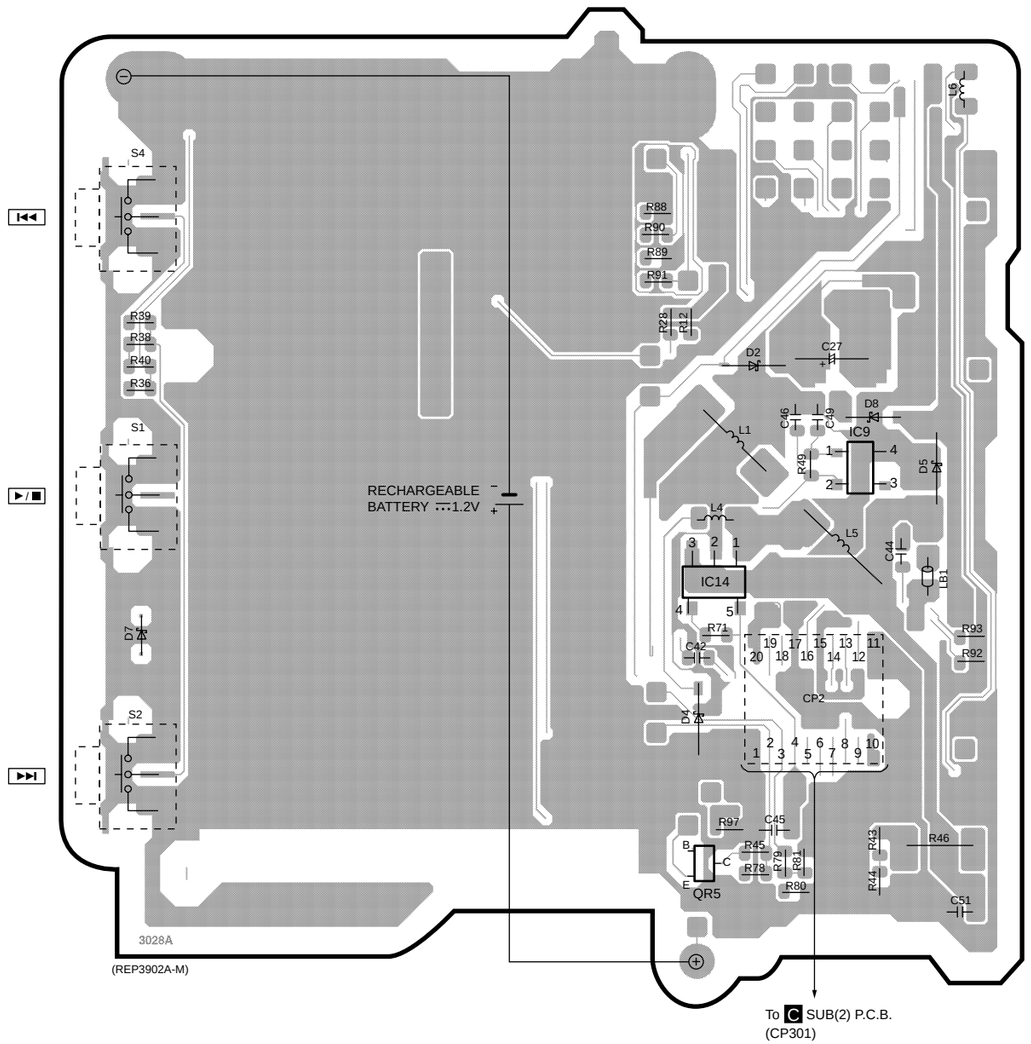
- To release, press and hold again until “HOLD OFF” is displayed.
- This is cancelled if the [OPR] is set to OFF or the auto power-off function turns the unit off.



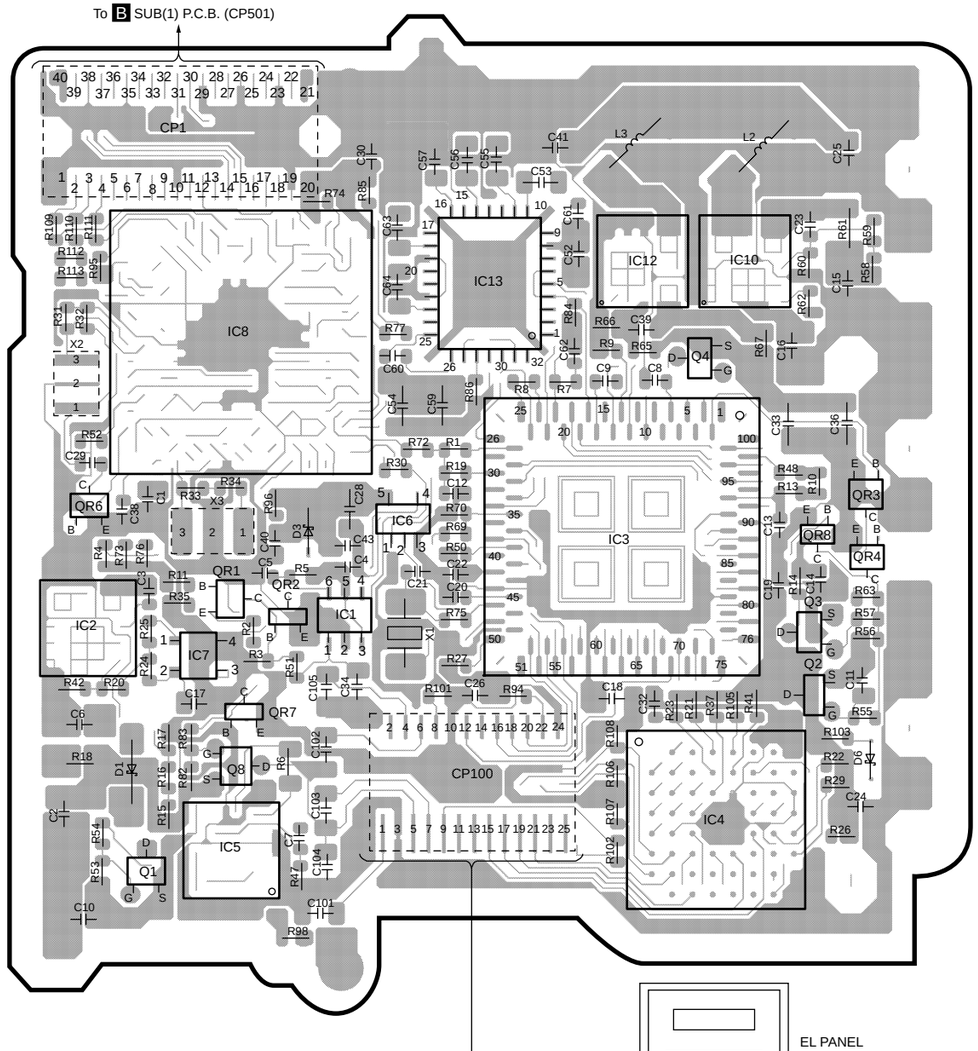
SV-SD100V(PP,EG,EB,GC,GK,GN) BLOCK DIAGRAM

Note: This printed circuit board diagram may be modified at any time with the development of new technology.

A MAIN P.C.B. (SIDE : B)

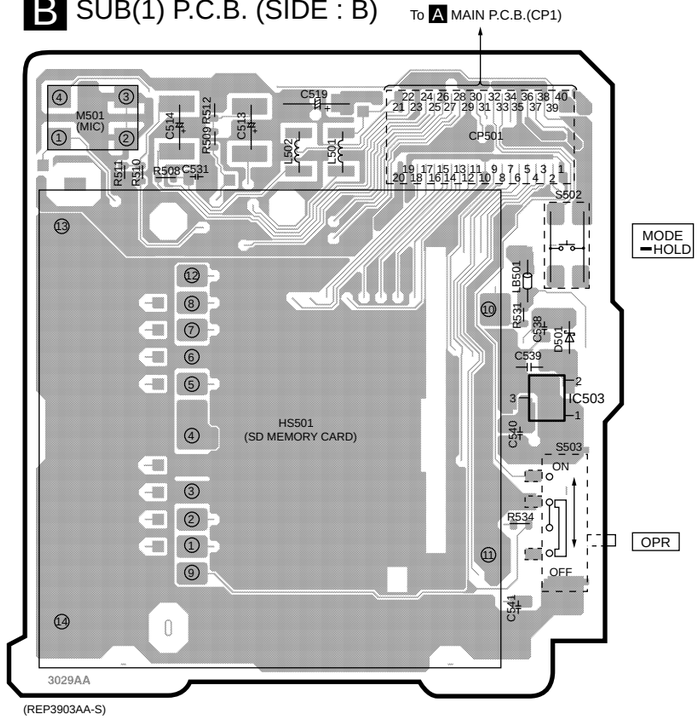


A MAIN P.C.B. (SIDE : A)

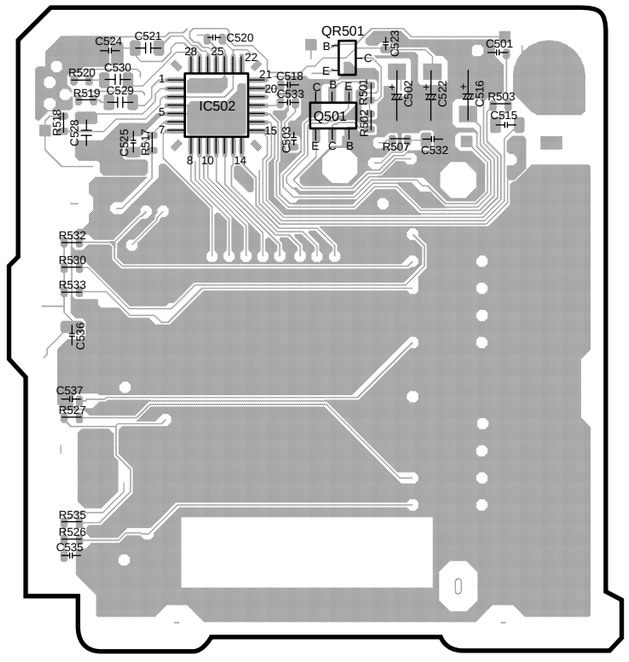


SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN P.C.B.

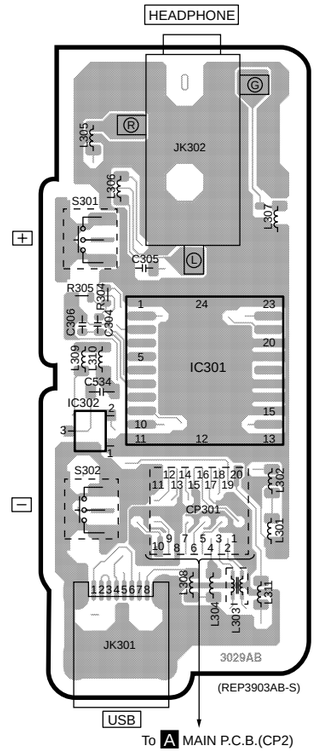
B SUB(1) P.C.B. (SIDE : B)



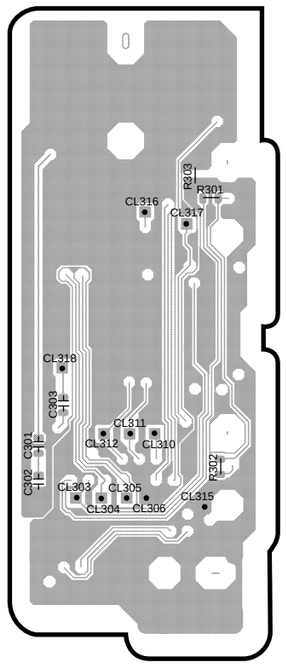
B SUB(1) P.C.B. (SIDE : A)



C SUB(2) P.C.B. (SIDE : B)



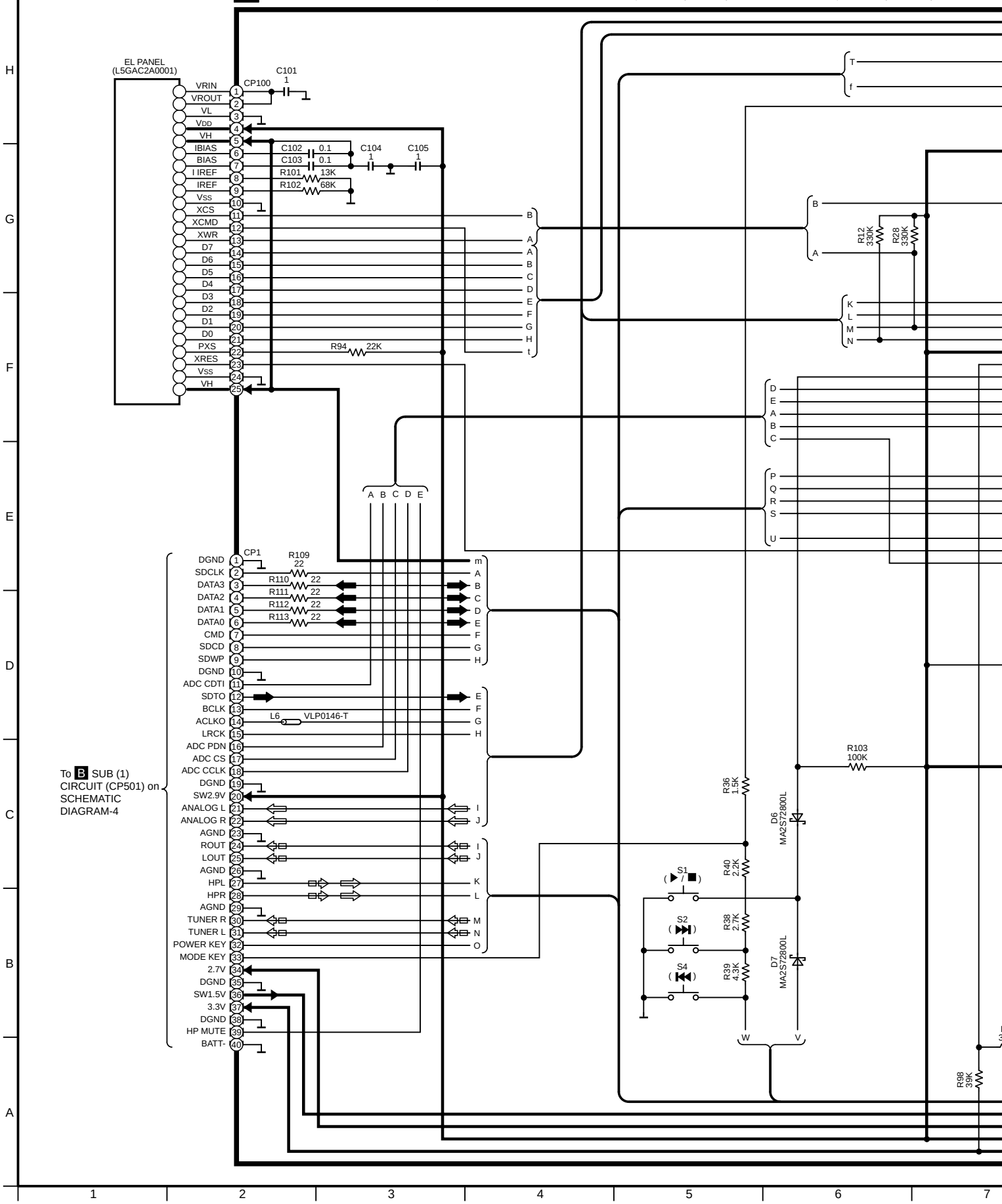
C SUB(2) P.C.B. (SIDE : A)



SCHEMATIC DIAGRAM-1

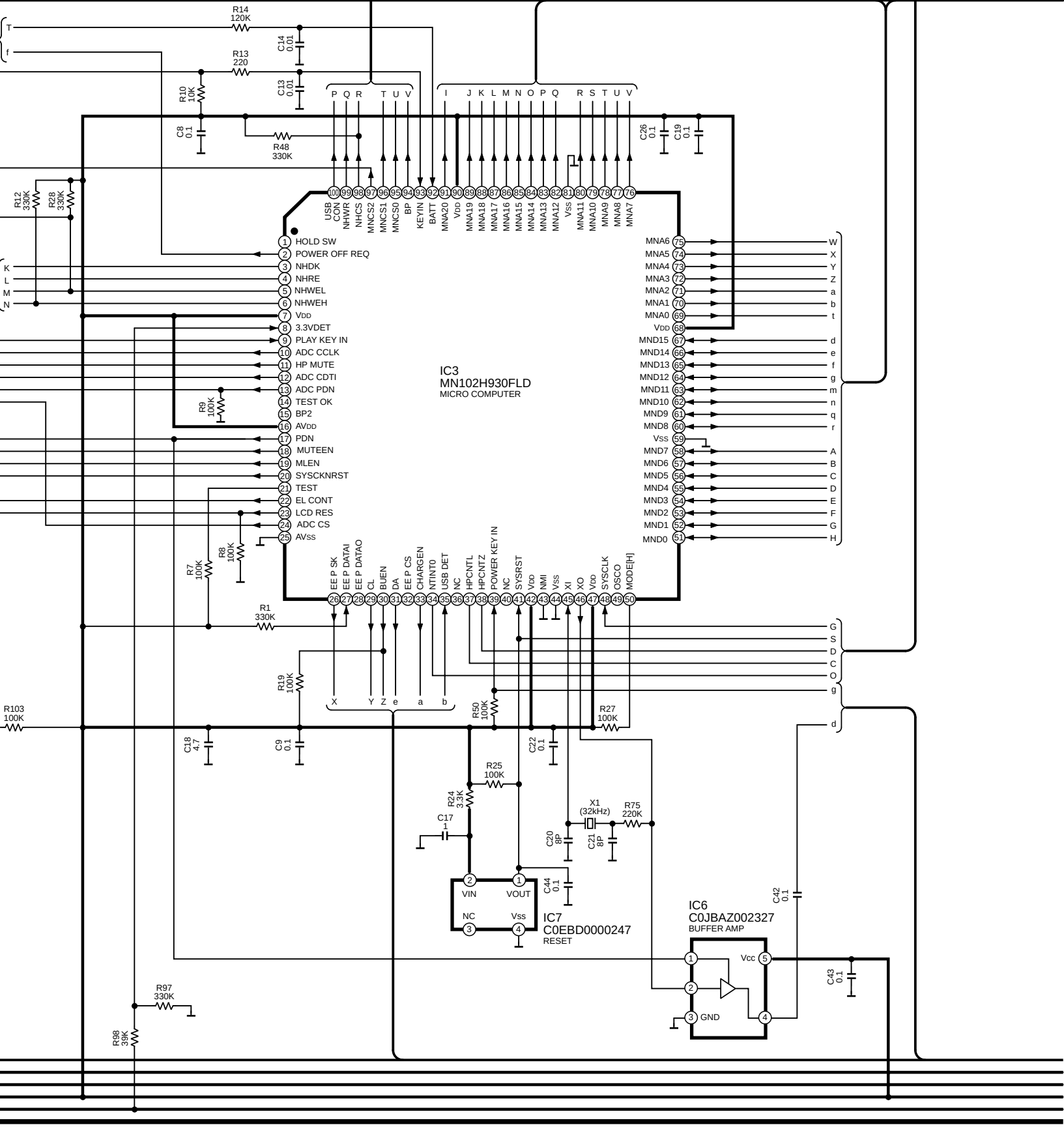
A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE



:AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE

Note: The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

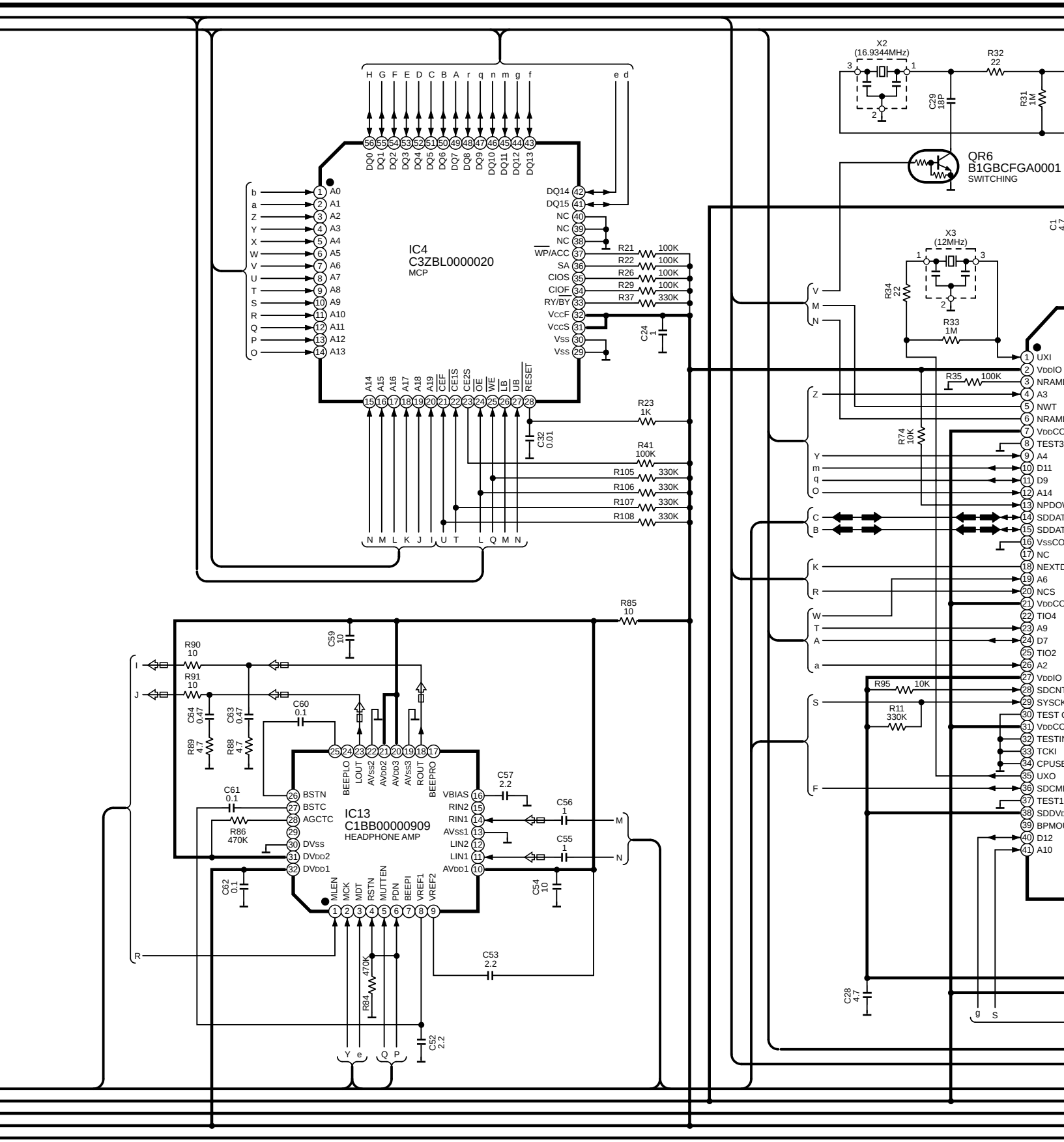


SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN CIRCUIT DIAGRAM

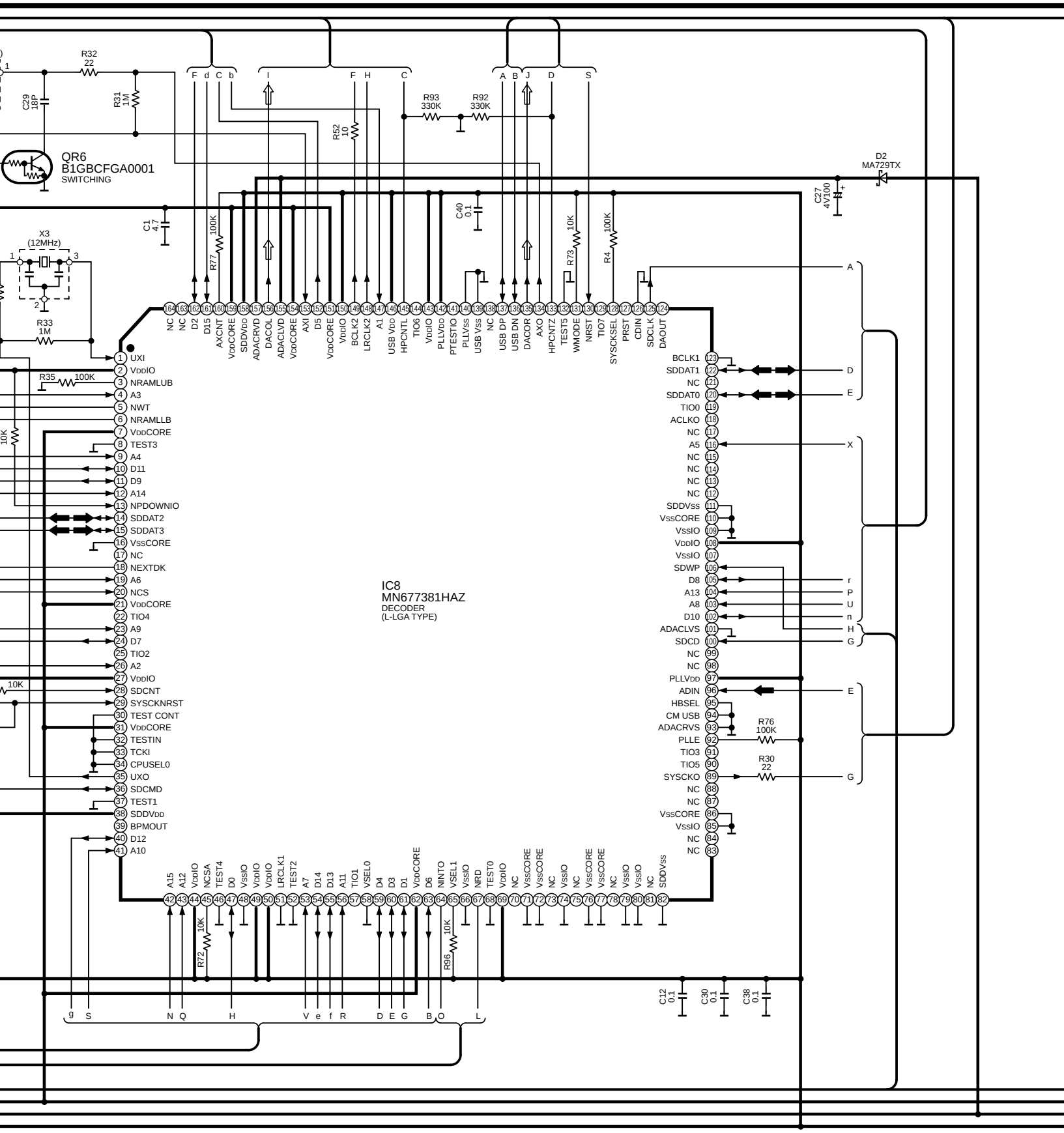
SCHEMATIC DIAGRAM-2

A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE :FM S



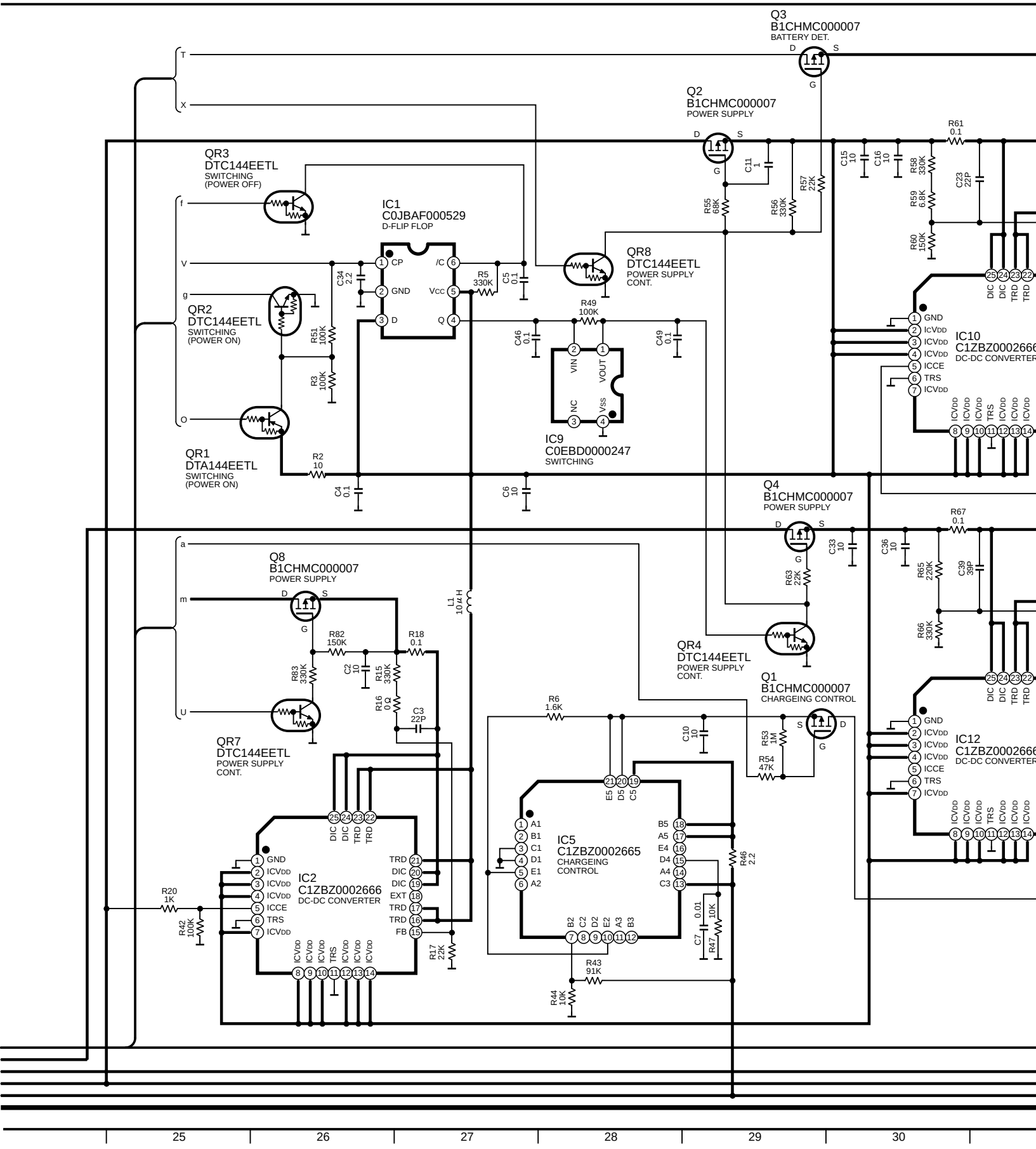
OG) SIGNAL LINE :FM SIGNAL LINE

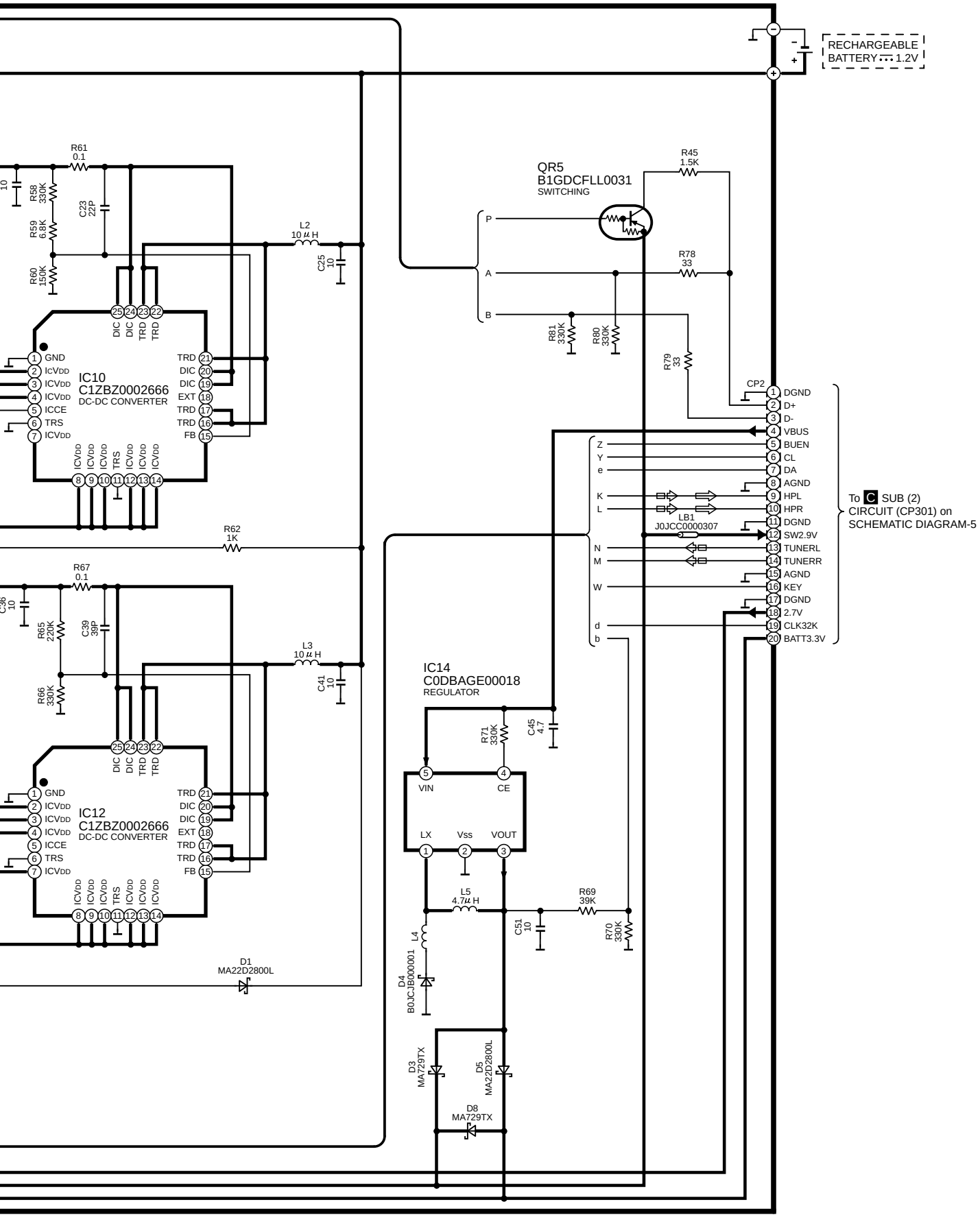


SCHEMATIC DIAGRAM-3

A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE





SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN CIRCUIT DIAGRAM

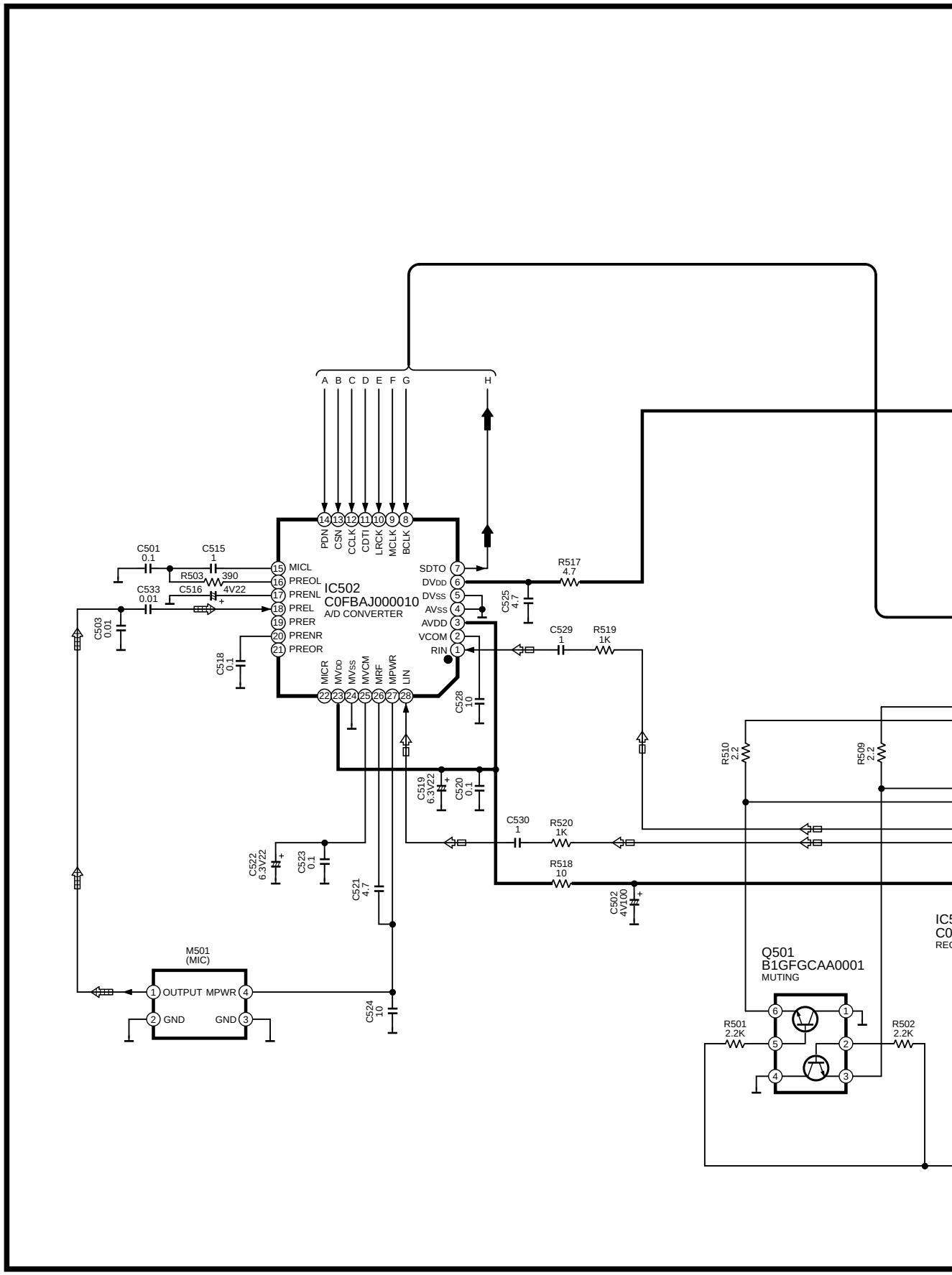
30 31 32 33 34 35 36

H G F E D C B A

SCHEMATIC DIAGRAM-4

B SUB(1) CIRCUIT

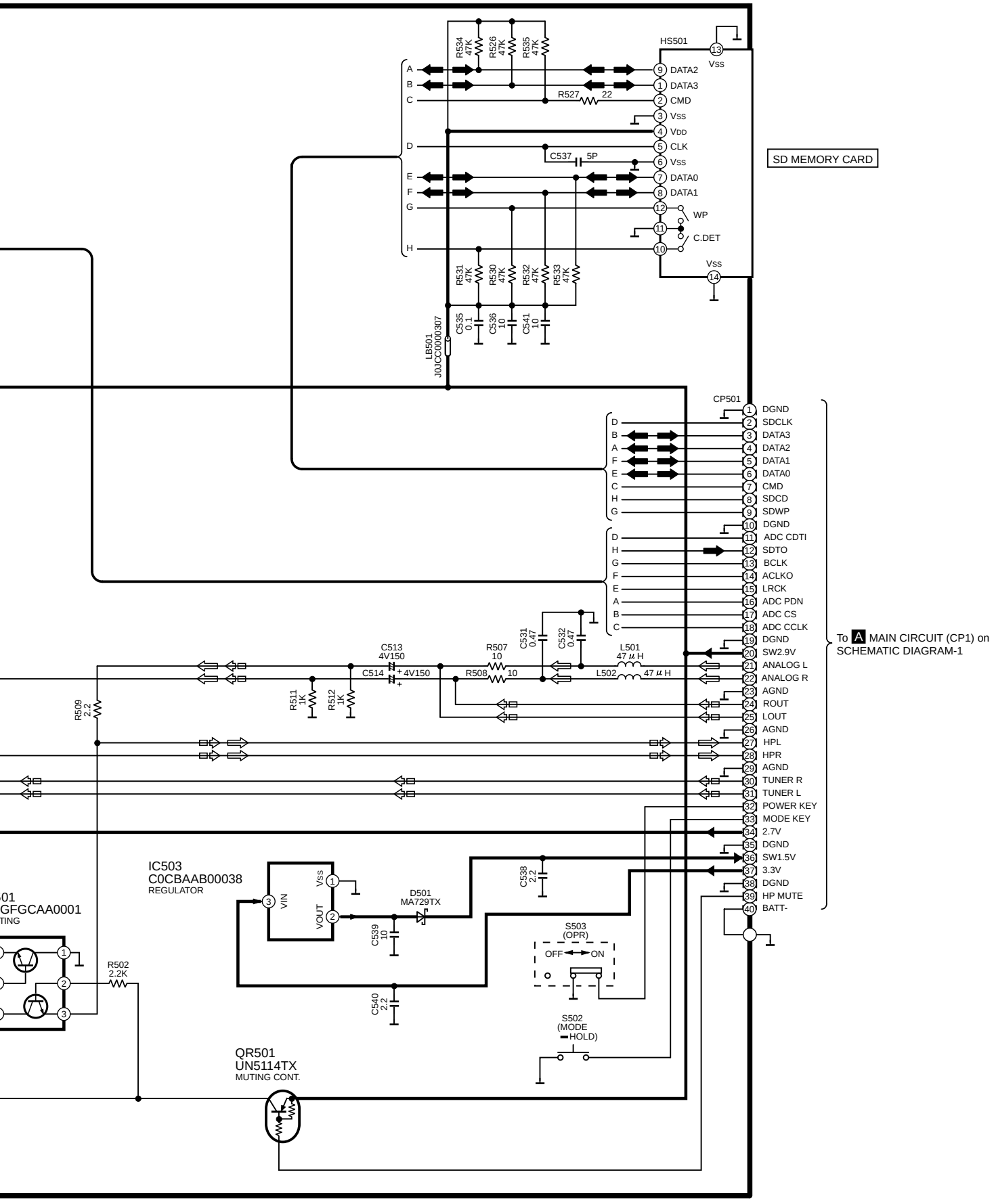
:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIG



A B C D E F G H

1 2 3 4 5 6 7

SIGNAL LINE :FM SIGNAL LINE :MIC SIGNAL LINE

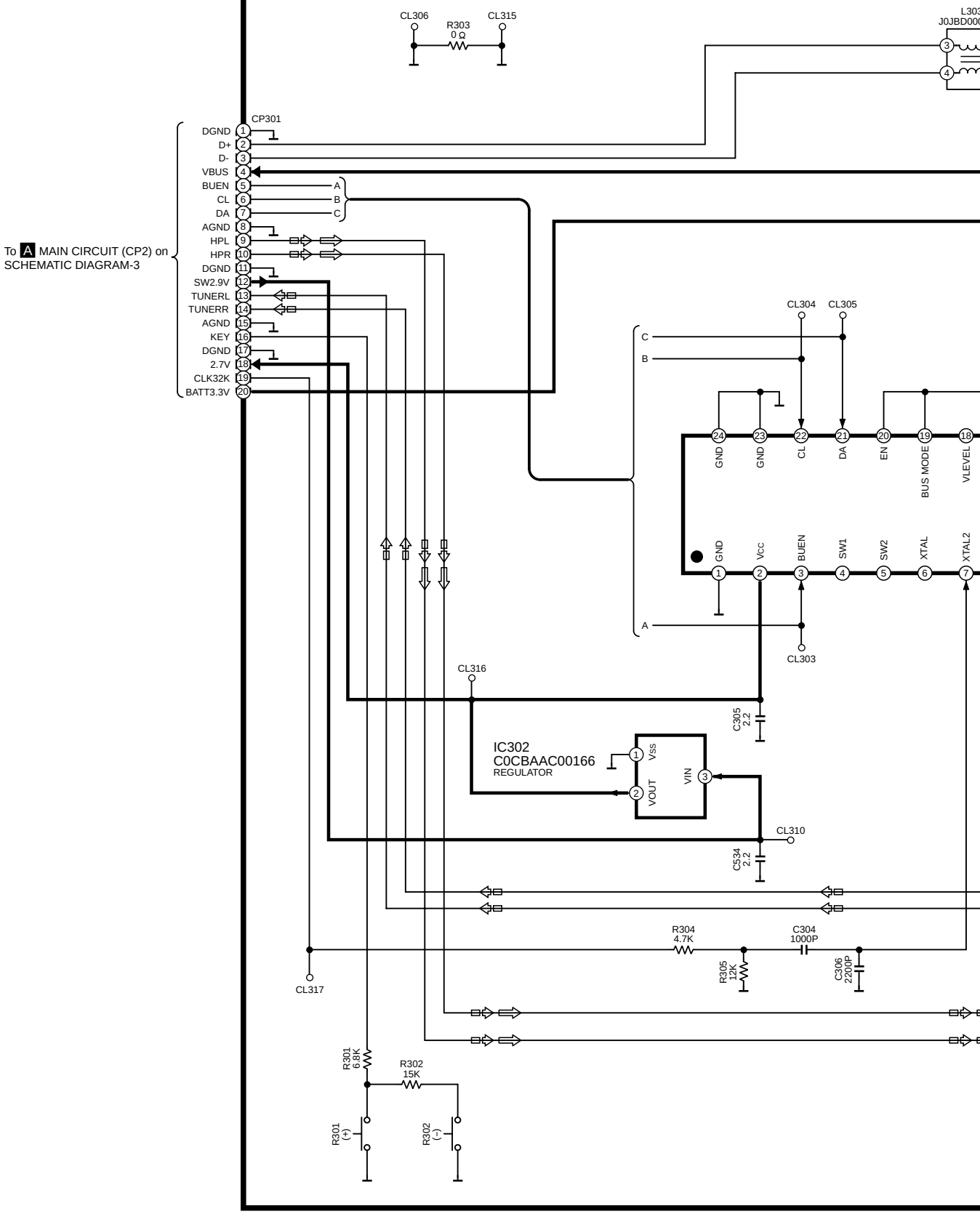


SV-SD100V(PP,EG,EB,GC,GK,GN) SUB(1) CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-5

C SUB(2) CIRCUIT

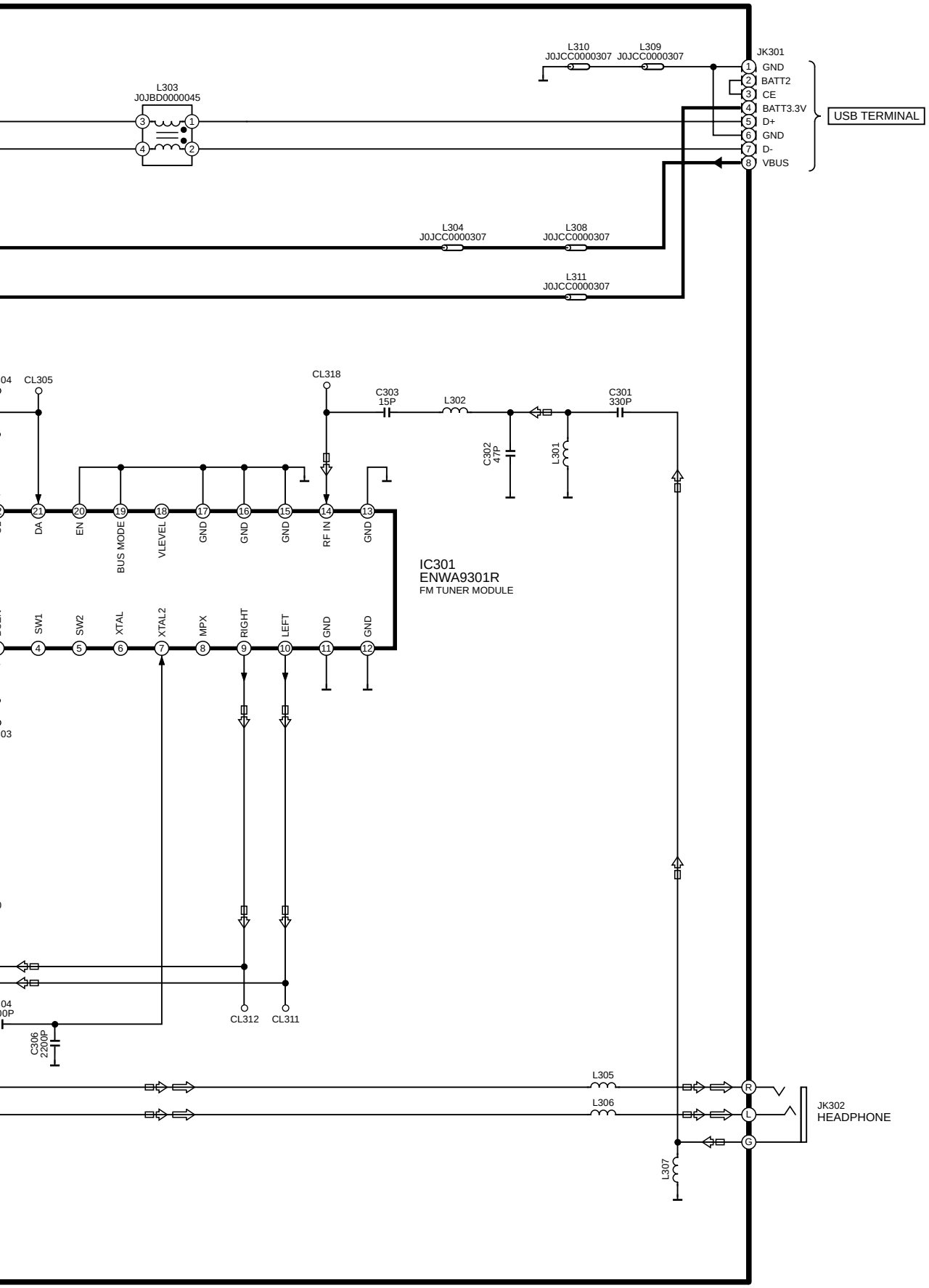
:POSITIVE VOLTAGE LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL



H G F E D C B A

1 2 3 4 5 6 7

SIGNAL LINE :FM SIGNAL LINE



SCHEMATIC DIAGRAM-1

A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE

Note: The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

EL PANEL (L5GAC2A0001)

IC3 MNPH930FLDR MICRO COMPUTER

IC6 C0JBAZ002327 BUFFER AMP

IC7 C0EBD0000247 RESET

To B SUB (1) CIRCUIT (CP501) on SCHEMATIC DIAGRAM-4

SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-2

A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE

IC4
C3ZBL0000020
MCP

IC13
C1BB00000909
HEADPHONE AMP

IC8
MN677381HAZR
DECODER
(L-LGA TYPE)

QR6
B1GBCFGA0001
SWITCHING

D2
MA729TX

X2 (16.9344MHz)
X3 (12MHz)

SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-3

A MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE

Q3 B1CHMC000007 BATTERY DET.

Q2 B1CHMC000007 POWER SUPPLY

QR3 DTC144EETL SWITCHING (POWER OFF)

IC1 C0JBAF000529 D-FLIP FLOP

QR8 DTC144EETL POWER SUPPLY CONT.

QR2 DTC144EETL SWITCHING (POWER ON)

QR1 DTA144EETL SWITCHING (POWER ON)

IC9 C0EBD0000247 SWITCHING

IC10 C1ZBZ0002666 DC-DC CONVERTER

Q4 B1CHMC000007 POWER SUPPLY

Q8 B1CHMC000007 POWER SUPPLY

QR7 DTC144EETL POWER SUPPLY CONT.

QR4 DTC144EETL POWER SUPPLY CONT.

Q1 B1CHMC000007 CHARGEING CONTROL

IC2 C1ZBZ0002666 DC-DC CONVERTER

IC5 C1ZBZ0002665 CHARGEING CONTROL

IC12 C1ZBZ0002666 DC-DC CONVERTER

D1 MA22D2800L

QR5 B1GDCFLL0031 SWITCHING

IC14 C0DBAGE00018 REGULATOR

RECHARGEABLE BATTERY 1.2V

LB1 J0JCC0000307

D4 B0JCJB000001

D3 MA729TX

D5 MA22D2800L

D8 MA729TX

To C SUB (2) CIRCUIT (CP301) on SCHEMATIC DIAGRAM-5

SV-SD100V(PP,EG,EB,GC,GK,GN) MAIN CIRCUIT DIAGRAM

H G F E D C B A

25 26 27 28 29 30 31 32 33 34 35 36

SCHEMATIC DIAGRAM-4

B SUB(1) CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(DIGITAL) SIGNAL LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE :MIC SIGNAL LINE

SD MEMORY CARD

HS501
A B C D E F G H
9 DATA2
1 DATA3
2 CMD
3 Vss
4 VDD
5 CLK
6 Vss
7 DATA0
8 DATA1
12 WP
11 C.DET
10
13 Vss
14 Vss

R534 47K, R526 47K, R535 47K, R527 22, C537 5P
R531 47K, R530 47K, R532 47K, R533 47K
C535 0.1, C536 10, C541 10
LB501 J0JCC0000307

IC502 C0FBAJ000010 A/D CONVERTER
15 MICL
16 PREOL
17 PRENL
18 PREL
19 PRER
20 PRENR
21 PREOR
22 MICR
23 MVDD
24 MVSS
25 MVCM
26 MRF
27 MPWR
28 LIN
SDTO 7
DVDD 6
DVSS 5
AVSS 4
AVDD 3
VCOM 2
RIN 1
14 PDN
13 CSN
12 CCLK
11 CDTI
10 LRCK
9 MCLK
8 BCLK

C501 0.1, C515 1, R503 390, C516 4V22, C533 0.01, C503 0.01
C518 0.1, C528 10, C519 6.3V22, C520 0.1
C522 6.3V22, C523 0.1, C521 4.7, C524 10
C525 4.7, R517 4.7, C529 1, R519 1K, C530 1, R520 1K, R518 10, C502 4V100
R510 2.2, R509 2.2, R511 1K, R512 1K, C513 4V150, C514 4V150, R507 10, R508 10
C531 0.47, C532 47, L501 47 μH, L502 47 μH

M501 (MIC)
1 OUTPUT MPWR 4
2 GND GND 3

Q501 B1GFGCAA0001 MUTING
R501 2.2K, R502 2.2K

IC503 C0CBAAB00038 REGULATOR
VIN 3, VOUT 2, Vss 1
D501 MA729TX
C538 2.2, C539 10, C540 2.2

QR501 UN5114TX MUTING CONT.

S503 (OPR) OFF ON
S502 (MODE HOLD)

CP501
1 DGND
2 SDCLK
3 DATA3
4 DATA2
5 DATA1
6 DATA0
7 CMD
8 SDCD
9 SDWP
10 DGND
11 ADC CDTI
12 SDTO
13 BCLK
14 ACLKO
15 LRCK
16 ADC PDN
17 ADC CS
18 ADC CCLK
19 DGND
20 SW2.9V
21 ANALOG L
22 ANALOG R
23 AGND
24 ROUT
25 LOUT
26 AGND
27 HPL
28 HPR
29 AGND
30 TUNER R
31 TUNER L
32 POWER KEY
33 MODE KEY
34 2.7V
35 DGND
36 SW1.5V
37 3.3V
38 DGND
39 HP MUTE
40 BATT-

To A MAIN CIRCUIT (CP1) on SCHEMATIC DIAGRAM-1

SCHEMATIC DIAGRAM-5

C SUB(2) CIRCUIT

:POSITIVE VOLTAGE LINE :AUDIO(ANALOG) SIGNAL LINE :FM SIGNAL LINE

To A MAIN CIRCUIT (CP2) on SCHEMATIC DIAGRAM-3

CP301: DGND, D+, D-, VBUS, BUEN, CL, DA, AGND, HPL, HPR, DGND, SW2.9V, TUNERL, TUNERR, AGND, KEY, DGND, 2.7V, CLK32K, BATT3.3V

CL306, R303 0 Ω, CL315

L303 J0JBD0000045

L310 J0JCC0000307, L309 J0JCC0000307

JK301: GND, BATT2, CE, BATT3.3V, D+, GND, D-, VBUS — USB TERMINAL

L304 J0JCC0000307, L308 J0JCC0000307, L311 J0JCC0000307

CL304, CL305, CL318

C303 15P, L302, C302 47P, L301, C301 330P

IC301
ENWA9301R
FM TUNER MODULE

GND, GND, CL, DA, EN, BUS MODE, VLEVEL, GND, GND, GND, RF IN, GND

GND, Vcc, BUEN, SW1, SW2, XTAL, XTAL2, MPX, RIGHT, LEFT, GND, GND

CL303, CL316, C305 2.2

IC302
C0CBAAC00166
REGULATOR
Vss, VOUT, VIN

CL310, C534 2.2

CL312, CL311

R304 4.7K, C304 1000P, R305 12K, C306 2200P

CL317

L305, L306

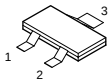
JK302 HEADPHONE: R, L, G

L307

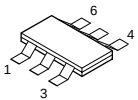
R301 6.8K, R302 15K, R301 (+), R302 (-)

SV-SD100V(PP,EG,EB,GC,GK,GN) SUB(2) CIRCUIT DIAGRAM

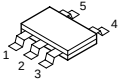
C0CBAAB00038
C0CBAAC00166



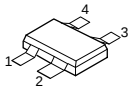
C0JBAF000529

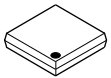


C0DBAGE00018
C0JBAZ002327



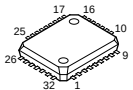
C0EBD0000247



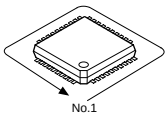


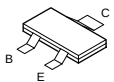
C1ZBZ0002665	21PIN
C1ZBZ0002666	25PIN
C3ZBL0000020	56PIN
MN677381HAZR	164PIN
ENWA9301R	24PIN

C1BB00000909



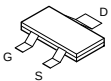
MNPH930FLDR	100PIN
C0FBAJ000010	28PIN



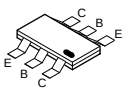


B1GDCFLL0031
B1GBCFGA0001
DTA144EETL
DTC144EETL
UN5114TX

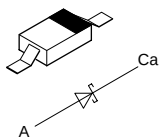
B1CHMC000007



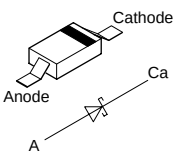
B1GFGCAA0001



B0JCJB000001
MA22D2800L
MA2S72800L

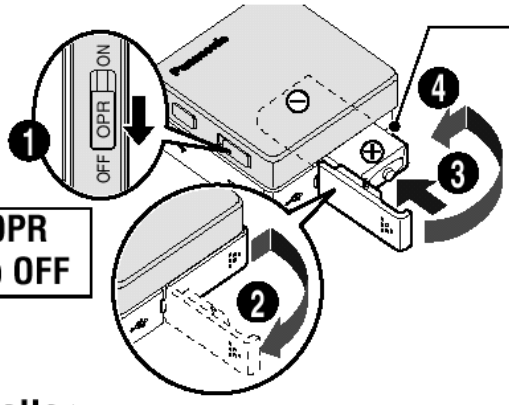


MA729TX



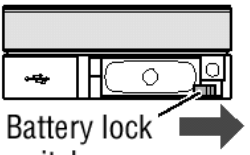
Rechargeable battery (included)

1 **Insert the rechargeable battery.**



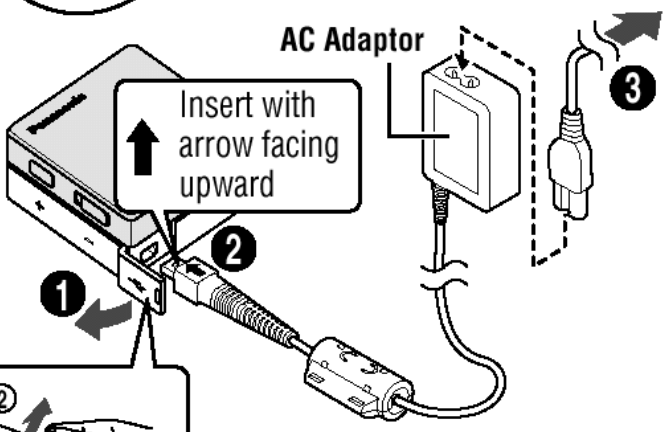
Set the OPR switch to OFF

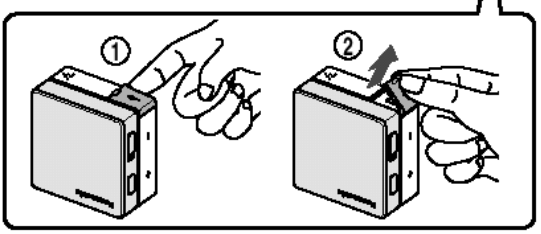
Remove the rechargeable battery
Push the battery lock switch to the outside.



2 **Charge the battery.**

Charge indicator
When charging starts: lights
While charging: scrolls
When charging finishes: goes out





Charging time:
Approx. 3 hours 30minutes

Note **Charging the battery**

- You can charge the battery before it is fully discharged.
- Reconnect the AC adaptor to charge the battery again.
- Use only the included AC adaptor and AC mains lead to avoid damage to the unit.
  Do not use the AC adaptor and AC mains lead with any other equipment.

AC adaptor (included)

Insert the rechargeable battery and connect the AC adaptor. (above)

- If you connect the AC adaptor during FM reception, the sound will stop for a short time. If you connect it during play or recording, these operations will stop.
- Operation is not guaranteed when using the AC adaptor only. Insert the rechargeable battery.

Battery indicator

You can not start Voice recording and FM recording when the battery indicator is blinking.

- Use the rechargeable battery and AC adaptor together, or use the fully charged rechargeable battery to start recording.